



VOLUME XI

No. 1,

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

MAY, 1936



PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S STATIONERY OFFICE
BY R. H. RITCHIE, ENNISKILLEN

GOVERNMENT OF NORTHERN IRELAND

MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

MAY, 1936

And in the reign of blast and storm,
Smiles many a long, bright, sunny day,
When the changed winds are soft and warm,
And heaven puts on the blue of May.

Bryant.

The weather last month was a mixture of March winds and April showers, the former being prevalent during the first three weeks of the month and the latter during the last week of April. None the less with so many open days for field work, farmers were enabled to overtake arrears and to bring this work completely up to date. This is a most satisfactory change, for the season commenced none too auspiciously. Two other noteworthy features of interest were the substantially larger shipments of potatoes to Great Britain during April, for which growers obtained remunerative prices, and the much improved trade for store and fat cattle during the month.

The Show season begins in the last week of May, when the Royal Ulster Agricultural Society stage their Annual Show at Balmoral, Belfast. This event has been described elsewhere as "The Farmers' Annual Holiday," and there is no doubt that this and other Agricultural Shows, of which a fixture list appears on page 37, whilst affording the necessary opportunities for combining business with pleasure, also play a large part in fostering understanding between town and country which is happily more marked than it was even twenty years ago.

For the convenience of readers visiting the Show at Balmoral, a special article dealing with the Ministry's exhibit to be staged there is printed on pages 10 to 14.

Attention is again drawn to the educational facilities afforded by the Ministry in the special article on this subject on page 14.

The results of the quarterly census of live stock taken at 1st April last are given on page 8, and the quarterly review of prices of agricultural commodities appears on page 7.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1ST MAY, 1936.

The weather during the greater part of April was dry, although extremely cold for the time of the year, and these conditions were very suitable for field work, which was considerably advanced and is now well forward for the season.

The month opened dry and cold, with temperatures rising for a short spell in the second week of April. At Eastertide, variable weather was experienced throughout the countryside, and showers of rain, sleet and snow fell in most districts. Although conditions continued unsettled until the end of the month, there were many dry days, and ground conditions remained satisfactory. Following the wettest period of the month, from the 23rd, 24th and 25th a welcome change took place, and fine April weather, showers followed by bright and warm sunshine, in the last week of the month, indicated the approach of summer. Nevertheless, the month was an extremely cold one, and east winds and severe ground frosts during the first three weeks retarded growth.

Soils were in excellent condition, and the work of sowing and planting was carried out with little interruption right throughout the month. The area under tillage is reported to be about the same as a year ago. In some districts there had been a tendency to plant a larger area under potatoes at the expense of flax and wheat crops, but in a few instances farmers have increased their area under flax.

The extremely cold east winds and the severe ground frosts retarded the growth of grass, and although pastures made rapid improvement with the warmer and moister weather at the end of the month, they are still in a rather backward state.

On account of the continued shortage of keep, stockowners were obliged to continue hand feeding with fodder and roots, and supplies of these home grown foodstuffs have been further reduced. On a number of farms supplies of home-grown foods are almost exhausted, and the heavy drain on supplies of hay this season is reflected in the higher prices ruling for this commodity.

Purchased foodstuffs continued to be in steady demand during the past month at prices showing only slight variations on the month.

With the continuance of cold weather and the shortage of keep, the hand feeding of store cattle and sheep was again necessary last month, and by this means many animals have been maintained in a fairly good condition. There are, however, many backward stores in the country, and whilst sheep have not suffered to the same extent from the weather, the flocks are in need of warmer weather and richer pastures to make normal thrive.

On the whole, the health of all classes of live stock has given little cause for complaint.

THE CROPS.

WHEAT.—The latest accounts to hand agree that the area under this crop is smaller than a year ago as the result of the severe winter. The sowing of spring wheat was carried out in some areas last month.

With the exception of early-sown crops, which are in a fairly promising state, the wheat brairds are poor, and some late-sown crops have become a total failure. Moist and warm weather is needed to stimulate growth, which, on account of the cold, east winds, has been very backward this season.

OATS.—The sowing of oats has been almost completed. The weather of April favoured this work, and ground conditions also were very suitable. It is estimated that the area under oats this season will be about the same as last year.

The brairds were slow in making their appearance on account of low ground temperatures during both the day and night.

Slightly decreased supplies of white oats were marketed last month, and prices hardened, the average prices per cwt. in April being $5/6$, as against $5/4\frac{3}{4}$ in March. This commodity, however, still remains slightly cheaper than a year ago.

BARLEY.—The sowing of barley has also been completed, and from reports to hand it is considered that the area under this crop will show a slight increase over that for last year. The brairds have made progress following the rains and warmer weather in the last week of the month.

FLAX.—Flax-seed was sown under ideal conditions last month, and the brairds generally are in a healthy state. Accounts of the area sown under this crop vary to some extent, but it seems likely that the total area under flax will be smaller than for last year. Enquiries from seed merchants have elicited the information that returns of sales of seeds were smaller than a year ago, and this fact gives considerable weight to the above view.

Supplies of flax marketed last month were smaller, and with trade remaining on the dull side, prices declined further. The average price per stone in April was $7/8$, as against $8/7$ in March, and the range of prices last month was from $5/-$ to $9/-$ per stone. It is estimated that only a small quantity still remains on hands, probably not more than 10 per cent. of the entire crop.

POTATOES.—The planting of early varieties of potatoes was finished at the beginning of April. Growth has been slow, and in some cases the heavy frosts have damaged the young plants. Very good progress was made with the planting of mid-season and main crop varieties of potatoes last month. This work has almost been completed, as the very good weather and soil conditions prevailing during that period

enabled it to be continued without interruption. It is estimated that the total area under potatoes this year will show a slight increase over last year's figure.

Accounts as to the keeping qualities of the old crop are generally satisfactory. Larger supplies have been sold off farms last month, and it is reckoned that only about 15 per cent. of the crop now remains on growers' hands.

The prices obtained at markets last month showed a slight downward trend during the first two weeks, but recovered in the second half of April, when they were a shade above the highest March levels. The following were the average prices during the past six weeks :—

Week ended.		Main Crop, all classes.		Arran Victory.		Kerr's Pink.	
		s.	d.	s.	d.	s.	d.
4th April, 1936	..	3	9	3	9 $\frac{1}{4}$	3	6 $\frac{3}{4}$
11th	" "	3	8	3	7	3	7 $\frac{1}{4}$
18th	" "	3	6 $\frac{3}{4}$	3	7	3	5 $\frac{3}{4}$
25th	" "	4	1 $\frac{1}{2}$	4	1 $\frac{1}{2}$	4	1 $\frac{3}{4}$
2nd May,	" "	4	1	4	0 $\frac{1}{2}$	4	2 $\frac{3}{4}$
9th	" "	3	11 $\frac{3}{4}$	3	11 $\frac{1}{4}$	4	0 $\frac{1}{2}$

As will be noticed from the following table, very heavy shipments of potatoes from Northern Ireland to Great Britain were made during April, particularly during the last two weeks of the month. The figure for the week ended 2nd inst. constitutes a new high record for weekly shipments.

Week ended.			Corresponding week 1935.	
		Tons.		Tons.
28th March, 1936	..	7,088		3,759
4th April, 1936	..	5,167		3,826
11th	" "	6,672		4,254
18th	" "	6,252		3,920
25th	" "	8,827		3,865
2nd May,	" "	13,155		5,437

Prices obtained by growers from shipping merchants during the first half of April were lower than in March. For the last two weeks, however, they have been on a par with the March levels.

The prices per ton paid by shipping merchants to growers during the week ended 2nd May ranged as follows :—

		Bagged.	Loose.
Up-to-Date (Red Soil)	..	£4 0 0 to £4 10 0	£3 15 0 to £4 5 0
Up-to-Date (Grey Soil)	..	£3 10 0 to £4 2 6	—
Arran Consul	..	£4 0 0 to £4 10 0	£3 10 0 to £4 5 0
Arran Victory	..	£3 5 0 to £4 5 0	£3 5 0 to £4 0 0
Kerr's Pink	..	£3 10 0 to £4 5 0	£3 10 0 to £4 0 0

MANGELS.—There are still fair supplies of mangels on farms where the crop is grown. The roots have kept very well except where exposed to the frosts.

TURNIPS.—Supplies of roots have decreased as the result of rotting, whilst the heavy ground frosts have also rendered some crops completely useless. With the heavy drain on supplies during the cold weather, and the losses referred to, stocks have become almost exhausted.

HAY.—Fodder was in keen demand on account of the poorness of pastures, and supplies of hay on most farms are stated to be smaller than is general at this time of the year.

First and second years' (upland) hay was marketed in decreasing quantities during April, and prices, which were steady throughout the month at an average figure of 67/- per ton, were a shade firmer than in March. Meadow hay was little changed in supply, and prices, which had an easier tendency up to the middle of April, recorded sharp advances during the last two weeks, and finished at the high level of 54/4 per ton.

LIVE STOCK.

CATTLE.—Stores are in only fair condition. Where hand feeding has been given they have made a fair thrive, but the absence of good keep in sufficient quantity is responsible for many thin and backward stores. The number of stores this season is stated to be about the same as last year, but it is added that large stores are scarcer than usual. The practice of stall feeding is stated to be on the increase in most districts, thus illustrating the fact that the beef subsidy continues to attract owners. Dairy cattle have been maintained in a normal healthy state. In some areas the milk yield is reported to be slightly

affected by the very cold weather. At fairs held during last month a good proportion of stores were in poor condition. There was a brisk demand for good quality stores in a forward condition, and also for fat cattle, and prices recorded an advance on the month. Trade for dairy cattle showed little change except for outstanding springing cows, which were in better request.

SHEEP.—The flocks are in a backward state, but having due regard to the extremely severe winter and the consequent shortage of grass, the position is not unsatisfactory. Lambing was almost completed at the end of the month. The crop is estimated to be slightly smaller than a year ago, and the rate of mortality among ewes and lambs at birth to have been slightly higher as the result of severe weather conditions. It is stated that in the mountainous districts of North Antrim foxes have been responsible for a number of losses amongst lambs. Supplies of sheep and lambs at fairs during April were small, and trade continued fairly satisfactory for anything fed for butchering.

PIGS.—Small supplies of young pigs offered for sale at fairs during April were in good demand, and prices were firmer on the month at 31/- per head, as against 30/3 per head in March. Sows for breeding were offered in small numbers, and those showing quality were in good request at prices ranging from £6 to £9 per head for first litter animals, and up to £12 10s. per head for exceptionally good older animals.

HORSES.—The trade for horses remained steady, and, according to records of sales effected last month, prices were fully maintained. Sound, strong animals of the draught type were selling at from £40 to £55 each, whilst best farm horses averaged about £40 each. Useful farm horses were quoted at from £20 to £30 each. Foals have begun to make their appearance and are looking strong and healthy.

MILK.—In some areas it is stated that the cold weather tended to depress the milk yield, but in general it would appear that supplies are well up to the average for the time of the year. Creameries paid from 3½d. to 5½d. per gallon for milk delivered during April, the separated milk being returned to the farmer in each instance. The average price paid during the month of March for that produced in Northern Ireland and delivered to creameries for manufacturing purposes was 4.87d. per gallon, and the Ministry has made equalisation payments at 1.13d. per gallon in order to bring the average price in respect of this month to 6d. per gallon, as provided by the Milk and Milk Products Act (Northern Ireland), 1934.

It should be noted that, under the regulations, creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier. Farmers should, therefore, bear in mind that the actual payments made to them, being calculated on a butter-fat basis, may be at a rate per gallon which may vary below or above this average figure.

THE MARKETS DURING APRIL.

The severe weather conditions continued to affect supplies of vegetables at markets last month which were smaller and of inferior quality. In most instances prices were dearer on the month. Pamphrey was 2d. dearer at 1/6 per dozen, parsley 2d. dearer at 2/- per bunch, carrots 4d. dearer at 13/- per cwt., and parsnips 4d. dearer at 6/11 per cwt. Savoys were firm in price at 4/- per dozen, whilst cauliflowers at 1/9 per dozen and leeks at 5d. per bunch were a little cheaper on the month. Farmers' butter was more plentiful than in March. The print class was unchanged in price at 1/2 $\frac{3}{4}$ per lb., and lump butter was $\frac{1}{4}$ d. cheaper at 11 $\frac{1}{2}$ d. per lb. There were large seasonal increases in supplies of hen and duck eggs marketed in April. Hen eggs were $\frac{1}{4}$ d. cheaper at 5d. per lb., and duck eggs 1/6 $\frac{1}{2}$ cheaper at 6/9 $\frac{1}{4}$ per 120. In the poultry markets, hens and ducks were more numerous, but supplies of chickens were smaller than in March. Hens were $\frac{1}{4}$ d. dearer at 1/9 each, chickens 1 $\frac{1}{2}$ d. dearer at 2/9 $\frac{1}{2}$ each, and ducks 1 $\frac{1}{4}$ d. dearer at 2/1 each.

THE COST OF LIVING INDEX FIGURE.

At 1st April, 1936, the cost of living index figure was 44, or two points below that for the previous month. The figure at 1st April, 1935, was 39.

PRICES OF AGRICULTURAL PRODUCE.

Table showing the average prices of agricultural produce in Northern Ireland during the three months ended 31st March, 1936, together with comparative figures for the same period in 1935 and the average prices ruling during the first quarter of the years 1911-1913:—

Commodity.	Quarter ended 31st March.			Percentage increase or decrease in price as compared with the corresponding period, 1911-13.	
	Northern Ireland.		Ulster	1st Quarter 1936.	1st Quarter 1935.
	1936	1935	1911-13		
	£ s. d.	£ s. d.	£ s. d.		
Oats (White) .. per cwt.	0 5 1	0 5 6 $\frac{1}{2}$	0 6 7 $\frac{3}{4}$	-23.51	-16.61
Potatoes "	0 4 2 $\frac{1}{2}$	0 2 1 $\frac{1}{4}$	0 3 2 $\frac{1}{2}$	+31.17	-34.42
Hay, Clover "	0 3 2 $\frac{1}{4}$	0 2 9 $\frac{3}{4}$	0 3 5 $\frac{1}{4}$	-7.27	-18.18
" Meadow "	0 2 5 $\frac{1}{2}$	0 2 2	0 3 4 $\frac{3}{4}$	-27.6	-36.20
Grass Seed, Perennial ..	0 13 2	1 7 2	0 12 6 $\frac{1}{2}$	+4.98	+116.61
Flax per stone	0 8 10	0 10 10 $\frac{1}{2}$	0 8 9 $\frac{3}{4}$	+0.24	+23.40
Calves (Young) .. per head	1 10 0	1 7 5	1 12 7 $\frac{1}{2}$	-8.04	-15.95
Store Cattle, 6-12 months "	6 3 0	5 13 11	4 16 11 $\frac{1}{2}$	+26.85	+17.49
" 1-2 years "	8 9 10	7 14 1	7 12 2	+11.61	+1.26
" 2-3 " "	10 11 5	10 0 2	10 1 1 $\frac{1}{4}$	+5.12	-0.47
Fat Cattle, 2-3 " "	13 11 9	13 7 2	13 7 4	+1.65	-0.06
" Cows & Bulls "	11 0 6	10 12 5	13 10 1	-18.36	-21.35
Springers (Cows & Heifers) "	14 6 11	14 9 4	14 16 1	-3.1	-2.28
Milch Cows (down calved) "	13 4 3	13 8 9	13 10 3 $\frac{1}{2}$	-2.22	-0.56
Fat Sheep, over 2 years "	1 12 0	1 11 10	1 17 6	-14.67	-15.11
Sows for breeding .. "	6 8 2	7 2 1	5 10 9	+15.72	+28.29
Young Pigs, 8-10 weeks old, "	1 10 1	1 10 3	1 4 2 $\frac{1}{4}$	+24.37	+25.03
Pork per cwt.	†2 15 9	†2 19 2	2 14 7	+2.14	+8.32
Butter, Farmers' .. "	5 19 0	4 18 9	5 9 3 $\frac{1}{2}$	+8.88	-9.65
Hen Eggs per lb.	0 0 7	0 0 6	*0 9 6 $\frac{1}{4}$	-	-

* All Ireland price per 120. † Average prices calculated from purchase and grading statements, allowance being made for deductions for levy and contribution charges.

LIVE STOCK CENSUS, APRIL, 1936.

Estimates of the number of live stock were made at the 1st April and the 1st October last year in addition to the complete censuses taken at the middle and at the end of the year. A further estimate has now been made of the numbers of live stock in Northern Ireland at the 1st April last and the results are shown hereunder. The estimate was based on returns received from some nine thousand farmers in Northern Ireland who furnished information regarding each class of live stock on their holdings at the 1st April. These figures were compared with the numbers of live stock on the same holdings at the 1st January last and the increases in stock for all Northern Ireland measured by the changes in numbers which had taken place on the farms from which returns were received.

The estimated numbers of live stock at the 1st April, 1935, and the results of the complete census at the 1st June last are also shown with the percentage changes which have occurred in the numbers since those dates.

	1st April, 1936.	1st June, 1935.	1st April, 1935.	% Increase April, 1936, as compared with	
				June, 1935.	April, 1935.
	No.	No.	No.		
Milch Cows	246,000*	252,297	245,000*	- 2.5	+ 0.4
Heifers in calf	39,000	27,339	45,000	+42.7	-13.3
Other Cattle	472,000	519,615	470,000	- 9.2	+ 0.4
Total Cattle	757,000	799,251	760,000	- 5.3	- 0.4
Ewes	380,000	367,030	360,000	+ 3.5	+ 5.6
Other Sheep	401,000	451,274	382,000	-11.1	+ 5.0
Total-Sheep	781,000	818,304	742,000	- 4.6	+ 5.3
Sows	56,000	47,436	45,000	+18.1	+24.4
Other Pigs	458,000	410,442	385,000	+11.8	+19.2
Total Pigs	514,000	457,878	430,000	+12.3	+19.5

* Including heifers in milk.

The numbers of cattle and sheep at the 1st April are not of course, strictly comparable with the numbers at the 1st June as the breeding season is not ended at the 1st April. The numbers of pigs at each date may, however, be regarded as comparable.

Prices of Agricultural Produce Contd. from P. 7.
As will be observed from this table, the prices ruling for agricultural commodities for the first quarter of this year bear favourable comparison with those for the other two periods shown. The most satisfactory features were the appreciably higher prices obtained for potatoes and the general advance in prices of store and fat cattle.

Both classes of hay were dearer last quarter as the result of the greater demand for fodder during the very severe weather of last winter and early spring. Farmers' butter and hen eggs were both dearer during the first three months of this year than in the corresponding periods of 1935 and the pre-war years. More satisfaction can be gained from these rises in prices when it is remembered that shipments of potatoes and of fat cattle last quarter were considerably heavier, and that payments made to Northern Ireland owners from the cattle fund were substantially greater than in the first three months of last year.

The steady decline in flax prices this season is shown in the prices for this crop last quarter and, while the average figure is similar to those recorded for the same period in 1934 and the pre-war years 1911-13 and is above the prices obtained during the first three months of the years 1931, 1932, and 1933, the returns this season have been disappointing compared with those obtained a year ago.

White oats fell further below their pre-war price and perennial grass seed was much cheaper than a year ago. Dairy cattle prices depreciated slightly.

Other downward movements in prices are shown for cattle, and sows for breeding, but in these instances the depreciation in value is small. Fat sheep and young pigs were practically unchanged in value compared with a year ago. Whilst the average price for pork shows a reduction on the figure for 1935 the prices obtained last quarter were no less economic, as the standard prices fixed by the Pig Industry Council make due allowance for the costs of feeding stuffs and these were cheaper in the corresponding quarter of 1935.

EDUCATIONAL EXHIBIT.

The Ministry's Exhibit will be staged as usual in the Central Exhibition Hall and Annexe at the Royal Ulster Agricultural Society's Show, which will be held at Balmoral, on Wednesday, Thursday, Friday and Saturday, May 27th, 28th, 29th and 30th.

The principal exhibits will concern the cultivation of field crops, live stock, milk production, diseases of livestock, poultry-keeping, horticulture and bee-keeping, marketing of farm produce, diseases of crops, and forestry. In addition, information will be available on the type of instruction given at the Agricultural Colleges and Schools for young men and young women in Northern Ireland, and at the Winter Agricultural Classes for young men.

For the purpose of demonstrating the superiority of healthy stocks of potatoes as compared with stocks which are severely affected with virus diseases, such as Mosaic and Leaf Roll, there will be on exhibition a replica of the plots grown at Stormont in 1935, in which these two classes of potatoes were compared. The actual produce of the Stormont plots, representing the yields obtained from one half square perch of each plot, will also be on view.

There is an increasing demand from foreign countries for seed potatoes from Northern Ireland. To meet this demand it is imperative that the import regulations imposed by these countries should be complied with. These regulations require that not only should the seed be the produce of crops certified as being of a high degree of purity, but also that they should have a high degree of freedom from diseases, such as Brown and Corky Scab, and serious blemishes. An exhibit will be staged to show both the class of seed potatoes that meet the requirements of customers, and the class of potatoes that are not acceptable. For the purpose of making a favourable impression in the markets it is of importance that not only should seed potatoes be well selected, but they should also be put on the market in an attractive form, and in neatly branded bags. The exhibit will include bags of potatoes suitably branded.

A general exhibit of potato diseases, which will include those attacking the growing plant and also the potato tuber in storage, will be arranged. Among the exhibits featured will be Black Scab, the Colorado Beetle, and Eelworm disease.

There will be an exhibit covering oats, flax, wheat and barley. In all cases, varieties of proved suitability for Northern Ireland will be shown and the results of county trials indicated. In the case of the oat crop the larger number of trial results available will make it possible to indicate, in many cases, which varieties should be grown and which avoided in certain districts.

The diseases of oats, barley and wheat will also be shown, particular stress being given to those which may be controlled by the disinfection of the seed prior to sowing. These diseases include Bunt of wheat, Covered Smut of barley, Loose and Covered Smut of oats and Leaf Stripe of oats.

Another exhibit will be designed to emphasise the importance of having seed competently tested before selling or sowing and will demonstrate the difficulty of determining the quality of samples by judgment alone. Official seed analysts will be in attendance to demonstrate the various processes in testing samples.

Another exhibit will be a collection of weeds in the natural growing condition. Four groups will be shown, namely—

- (1) Plants known to be poisonous, or reputed to be poisonous to livestock. Most of these are to be found in Northern Ireland—some being very common. Numerous cases of poisoning probably referable to one or other of these plants, are recorded each year.
- (2) Those declared to be noxious weeds under the Weeds and Agricultural Seeds Acts (Northern Ireland) of 1909 and 1929. These weeds must be destroyed as and when directed by the Police.
- (3) Weeds listed as “injurious” for the purposes of the English Seeds Act, 1920. The presence of seeds of these weeds to an extent exceeding the minimum specified under the Act, must be declared by anyone selling seed under the Act.
- (4) Weeds concerning which the Seeds Act, 1920, contains special provisions. Some of these have in the past been used as adulterants and one is parasitic.

An exhibit will be staged to show the relative values of various forms of liming materials and the benefits which result from the judicious use of lime. In addition, attention will be drawn to the indirect effect of certain phosphatic fertilisers in helping to reduce acid conditions in the soil. Various types of apparatus used in the laboratory for testing the degree of acidity of soils will also be shown. The results of such tests will be of use in determining to what extent liming may be necessary.

The feeding of live stock will receive due attention and an attempt will be made to show how efficient rations may be made up economically by the use of suitable foods which are the best value at the time of purchase. Particular attention will be given to rations for pigs, dairy cows and poultry. Live pigs, calves and poultry on which actual feeding tests have been carried out will be on view. Two lots of pigs will show the comparative costs of feeding (1) to the usual bacon weights and (2) to the lighter weights suitable for Wiltshire cure.

A dairying exhibit will take the form of an artistic display of dairy produce, including milk, butter, cream and ice-cream. Typical

samples of milk drinks as sold in milk bars will also be on view. The Methylene Blue Reductase Test as applied to Grade C milk will be explained by means of suitable apparatus, and advice will be given as to how the test is carried out. In the Annexe, demonstrations will be given daily in a working byre and dairy. These will show in detail the various apparatus and operations necessary to produce milk up to the standard of the various grades. The times of the demonstrations will be, Wednesday, 4 p.m. ; Thursday, 11 a.m., 4 p.m. and 7.30 p.m., and Friday, 11 a.m. and 4 p.m.

Farmers who believe that "prevention is better than cure" will find it worth while visiting the Veterinary Research Division exhibit. Parasitic diseases are responsible for serious annual loss and many obscure conditions are directly or indirectly due to the effects of parasitic infestations. The part that overcrowding and long-continued use of a pasture plays in increasing parasitic infestations is emphasised. Hoose, Red Water, Parasitic Gastritis, Coccidiosis, Liver Fluke, Gapes, etc., are but a few of the diseases that can be prevented by the "follow the plough" policy.

The importance of preventing anaemia in pigs is emphasised and attention will be drawn to the association between this condition and pneumonia, probably the most common cause of death in young store pigs. Charts illustrating the life histories of intestinal and lung worms of swine will catch the eye. Poultry diseases will not be overlooked. One exhibit will show how to get on the accredited list of poultry breeders and the important part blood-testing plays in preventing Bacillary White Diarrhoea. Blackhead, Fowl Pox and other poultry diseases will be featured. Another exhibit will deal with scheduled diseases and will show that to wipe out these diseases the co-operation of live stock owners is essential. Advice on the planning of new byres or on the conversion of old ones may be had. A section devoted to the life history and control of the Warble Fly will be of immediate interest.

If the poultry industry in Northern Ireland is to continue to occupy its present position of importance, it must rest on a sure foundation. This may be defined as follows :—The poultry-keeper must be able to make reasonable profits if his stock is of average quality and is managed on up-to-date lines. In the poultry section, methods of maintaining and improving the quality, production and general health of poultry stock will be shown. This year an attempt will be made to show how the ideals of the poultry breeder contrast and at some points clash with those of the commercial egg producer. The former, if he is worthy of the name of a poultry breeder must look much further ahead than his client, the egg producer. One striking example of this difference in outlook may be given. A poultry breeder values his old hens and rightly so. He continues to keep them, although the number of eggs they lay may be small, because of their value for

breeding. The birds have shown their capacity as egg layers in their pullet year. They are now proving their stamina—to live as well as lay. The commercial egg producer, on the other hand, would find it uneconomic to keep old hens on his farm to produce eggs for the market.

Types of birds will be shown to illustrate certain faults which, if perpetuated by breeding from birds having them, will undermine the quality and vigour of Northern Ireland stock.

Methods of feeding and management of birds from chickenhood onwards will be illustrated, differentiating between birds intended for breeding purposes later in life, and those intended for supplying market eggs and not to be used for breeding. The importance of table poultry as a side line will also be indicated.

Poultry-keepers who adopt early hatching and indoor rearing have to include cod liver oil in the ration for their young chickens in order to avoid troubles, such as certain forms of leg weakness. The quality of the cod liver oil is important and information will be given regarding the standards by which an oil may be judged. The results of recent research on poultry nutrition will be demonstrated.

In the marketing of eggs and poultry section the new system of grading eggs on the individual weight basis will be demonstrated. Other exhibits will direct attention to the advantages, both to the producer and the consumer, of eating more eggs, and of an extended use of home-produced liquid egg. The losses which are incurred annually by the egg industry, as a result of faulty methods of handling and storing eggs, will be shown and hints given on how these losses may be prevented. Information on the grading of dead poultry will be available.

The horticultural section will deal with the marketing of fruit and vegetables. Not only is it necessary for the grower to produce sound clean crops : it is equally necessary for him to put the produce on the market in a way that it will command the best price and give satisfaction to the buyer. A section will, therefore, be devoted to the grading of apples and the packing of them in British standard boxes. There will also be a display of vegetables packed in containers suitable for use in local markets. A collection of glasshouse produce indicating local enterprise and showing what can be done under home conditions will also be staged. Modern methods for the control of "Finger and Toe" of cabbages, etc., and of the carrot fly will be shown. Among the exhibits in this section will be one illustrating the prevention of capsid bug damage to apple trees by the use of mineral oil sprays.

Success in tree planting depends to a great extent on choosing the species best suited for the soil and situation of the site to be planted and this year an exhibit will be arranged to show the effect of these factors on the growth of two well-known species of tree, namely,

Scots Pine and European Larch. In addition to showing the influence of soil and exposure on the height growth, cross-sections of the butts of the trees will be staged to demonstrate the effect on the quality of the timber produced.

The provision of shelter on difficult sites and the effect of frost on Sitka Spruce will also be illustrated. Further, a section showing young plants of some forty kinds of trees grown in Northern Ireland, together with a specimen of the trunk of each species and a hand specimen of the timber will be attractive and interesting. Typical specimens illustrating the species and size of young plants which are supplied to farmers from the Ministry's nurseries at 30/- per 1,000 will also be shown.

Copies of leaflets and pamphlets will be available. The exhibit will be open for inspection as follows :—

Wednesday, 27th May	..	..	from 10 a.m. to 6 p.m.
Thursday, 28th	„	..	„ 10 a.m. to 9 p.m.
Friday, 29th	„	..	„ 10 a.m. to 6 p.m.
Saturday, 30th	„	..	„ 10 a.m. to 6 p.m.

AGRICULTURAL EDUCATION.

The importance of educating the agricultural community in matters connected with their industry is kept right in the forefront of the Ministry's policy. The Ministry's educational policy is to a great extent based on its own extensive research and experimental work, and a continual endeavour is made, with the co-operation of the local agricultural committees, to bring the results of this work directly to the notice of farmers. Many of the most up-to-date farmers are only too willing to avail themselves of these results and many have been led to take an interest in such matters in view of the recent introduction of marketing schemes with their attendant increased necessity for attention to quality of produce. The following details may, however, be of general interest ; they cover the cases of men and women, boys and girls, those who have full time to devote to learning, and those who can afford only a few hours per week in the winter months.

WORK OF INSTRUCTORS AND OVERSEERS.

There is an Instructor (or Overseer) in Agriculture, Horticulture, Poultry-keeping and Butter-making allotted to your district and the services of each of these officers, who are practical as well as technical experts in their own particular subjects, are at your command entirely

free of charge on any matter on which you desire to be advised. It is impossible for them to get into close contact with all the farmers in their districts, but if you have not already made their acquaintance you should do so in your own interest without delay. Their names and addresses may be obtained from the Ministry or from the Secretary or Agricultural Organiser of your County Committee of Agriculture.

COURSES FOR FEMALE STUDENTS.

(1) POULTRY-KEEPING AND BUTTER-MAKING CLASSES.

These are organised by County Committees of Agriculture at different centres in the spring of each year in each county. They are attended almost entirely by women and girls and each class lasts from three to five weeks, practical and theoretical instruction being given on from three to five days per week, generally in the evenings.

(2) NORTH-WEST SCHOOL, STRABANE.

This School for girls is controlled by the Ministry but admission for a term of eleven weeks is by scholarship awarded by the County Committees of Agriculture. A scholarship entitles the holder to free board, residence and instruction in Poultry-keeping, Dairying, Rural Housewifery and Sick Nursing. Candidates must be between 17 and 35 years of age. Application for scholarships should be addressed to the Secretary or Agricultural Organiser of the County Committee of Agriculture.

(3) ULSTER DAIRY SCHOOL, COOKSTOWN.

This School for girls is also controlled by the Ministry and instruction is given in the same subjects as at the North-West School, but as the course is a longer one it is possible for the pupils to obtain more detailed instruction than at the Strabane School. The school is quite up to the standard of the best boarding schools in the country and the buildings and surrounding grounds are most extensive. Fifty pupils are admitted each term and the fees for board, residence and instruction are only £3:3:0 per term of three months. The ordinary School course comprises three such terms. The standard of instruction provides suitable girls with the opportunity for qualifying at the School for training for the post of Instructor in Poultry-keeping and Dairying. This further training includes spending one year at an approved farm as an apprentice, and during this period the Ministry pays the student a maintenance allowance of 15/- per week. All the Instructors appointed in Northern Ireland in recent years have received their preliminary training at the Ulster Dairy School. Selected girls may also qualify as dairymaids and the Ministry provides a maintenance allowance of 12/6 per week during their twenty-four weeks' course of practical training in an approved creamery. The majority of the girls who attend the Ulster Dairy School will, of course, return to their homes to put their knowledge of the best methods into practice in their home life. At both Schools the girls are under the supervision of experienced matrons and their welfare is assured.

COURSES FOR MALE STUDENTS.

(1) WINTER AGRICULTURAL CLASSES.

These are organised by County Committees of Agriculture and extend over a period of four to five months during the winter. Instruction is given in Agriculture, Horticulture, and in some cases Veterinary Hygiene, on two days per week for four hours each day, commencing in the afternoon. The Ministry attaches the greatest importance to these classes for they provide the best possible opportunity for a farmer or his son to secure the ground work of the principles of scientific farming.

(2) GREENMOUNT AGRICULTURAL AND HORTICULTURAL COLLEGE, MUCKAMORE.

There are few, if any, more attractive opportunities offered to farmers' sons anywhere for securing a sound training in Agriculture or Horticulture than to the youth of Northern Ireland at this College. It is an extensive boarding establishment fully equipped in every respect and 50 pupils, who must be over 16 years of age, are admitted for each session which commences in October and ends in July of the following year. Most of the entrants are holders of scholarships, awarded by County Committees of Agriculture on the results of competitive examinations, which entitle them to free board, residence and instruction. The value of a scholarship is £65 per session, which is the fee charged to non-scholarship holders. The majority of successful candidates for the valuable scholarships mentioned below are young men who have passed through this College.

(3) UNIVERSITY SCHOLARSHIPS IN AGRICULTURAL SCIENCE.

Four scholarships are offered for competitive examination each year. They are tenable at the Queen's University, Belfast, and each is of the value of £95 per annum for four years enabling the holders to graduate as Bachelors of Agriculture. Their value enables a student to pay his fees and retain a fairly substantial balance for upkeep purposes; this also applies to the scholarships in Horticulture and Creamery Management mentioned below. Practically all the best posts connected with technical agriculture are now filled by applicants who possess a University Degree and scholarship holders who complete their course are eligible for posts, such as Agricultural Organiser to a County Committee of Agriculture, Instructor, Inspector under the Ministry, Research Officer, etc.

(4) SCHOLARSHIPS IN HORTICULTURE.

One of these is generally offered in alternate years and is of the same value and tenable for the same period as the Scholarships in Agricultural Science. A special course of training drawn up by the Ministry provides for instruction at Greenmount Agricultural and Horticultural College, Queen's University, Belfast, The Botanic Gardens, Glasnevin, The Hertfordshire Institute of Agriculture and for the final year at

a commercial fruit or vegetable farm in England. The course enables scholarship holders to qualify for the posts of Horticultural Instructor or Inspector.

(5) SCHOLARSHIPS IN CREAMERY MANAGEMENT.

Two such scholarships are generally offered in alternate years and are tenable at the University College, Cork, where holders are enabled to pursue the course leading to the award of the Diploma in Dairy Science. The scholarships are each of the total value of £98:6:0, and the course of training comprises two winter terms at the College with an intervening period of 20 weeks devoted to practical training in creameries. The Diploma is naturally one of the very highest qualifications which an applicant for the position of Creamery Manager can possess.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934.

ELECTION OF MEMBERS TO THE PIG INDUSTRY COUNCIL BY LICENSED BACON CURERS.

The Agricultural Marketing (Pig Industry) Act (Northern Ireland), 1934, makes provision for the establishment of a Council whose duties are to determine from time to time the prices at, below, or above which, pigs or any description of pigs may be sold ; to advise and report to the Ministry as to the granting of licences to bacon-curers ; to perform such functions as are required in connection with the registration of contracts for the purposes of this Act ; and to advise the Ministry as to the production, marketing and grading of pigs and bacon, and the encouragement of agricultural education and research connected with the production and marketing of pigs and bacon and as to such other matters as may be referred to the Council by the Ministry.

The Act prescribes the constitution of the Council as follows :—

Three members appointed by the Minister of Agriculture of whom such one as the Minister may designate shall be chairman.

Three members appointed or elected as follows :

- (a) if a bacon marketing scheme is in force appointed by the bacon marketing board to represent licensed bacon-curers ;
- (b) if no bacon marketing scheme is in force, elected, in accordance with the prescribed regulations, by licensed bacon-curers.

Three members appointed or elected as follows :

- (a) if a pigs marketing scheme is in force appointed by the pigs marketing board to present pig producers ;
- (b) if no pigs marketing scheme is in force, elected, in accordance with the prescribed regulations, by pig producers.

The bacon marketing scheme lapsed on the 30th September, 1935, and accordingly it became necessary to make regulations governing the election of three members to the Council by licensed bacon-curers. The regulations required each candidate for election to be nominated in writing by two persons as proposer and seconder and by at least eight other persons as assenting to the nomination. Nominations were to be sent by registered post so as to reach the Ministry on, or before, the 18th April, 1936.

Nominations were received on behalf of only three candidates and as none of them withdrew they were declared elected in accordance with the regulations.

The persons nominated by licensed bacon-curers and declared elected were :—

1. John J. Buchanan, Esq., c/o. Messrs. Buchanan Bros., Foyle Street, Londonderry.
2. J. H. Finlay, Esq., c/o. Messrs. John Rea, Limited, 34, Ann Street, Belfast.
3. Kenneth D. L. Sinclair, Esq., D.L., c/o. Messrs. J. & T. Sinclair & Co., Limited, 7, Tomb Street, Belfast.

The Minister of Agriculture has appointed Sir D. E. B. McCorkell, M.B.E., D.L., Ballyarnett, Londonderry (chairman); Lt.-Col. J. Patrick, D.L., J.P., Dunminning, Glarryford, Co. Antrim, and Major Malcolm Speir, M.C., L.M.S. Railway Co., York Street, Belfast, as members of the Council and the Pigs Marketing Board have appointed Messrs. J. S. Gordon, C.B.E., D.Sc.; R. Elliott, M.P., and A. A. McGuckian as their representatives.

The members appointed by the Minister of Agriculture and elected by licensed bacon curers will hold office for a period of two years, whilst the members appointed by the Pigs Marketing Board will hold office for a period of one year.

The new Council will come into office on the 1st June, 1936. The tenure of office of the existing Council expires on the 31st May, 1936.

PIG INDUSTRY COUNCIL FOR NORTHERN IRELAND.

STANDARD PRICE.

MAY, 1936.

For the determination of the Standard Price for May, 1936, by means of the Formula approved by the Pig Industry Council, the following data were used :—

	PERIOD.	
Cost of Standard Ration ..	16 weeks ended 18th April, 1936.	6/11½ per cwt.
Realised price of Bacon & Hams ..	4 weeks ended 18th April, 1936.	88/2 „
Realised price of Fresh Meats ..	Do.	13/4 per 185 lb. of carcass.

The Standard Price for May, 1936, will, therefore, be 55/10 per cwt.

PIG PRICES FOR MAY, 1936.

The Pig Industry Council for Northern Ireland have announced the following prices for dead pigs for sale by producers to curers in Northern Ireland in May, 1936 :—

PRICES PER DEAD CWT.

Weight Class (Dead weight).	Grade A.	Grade B.	Grade C.	U.L. or U.F.
I. c.1.1.14 to c.1.2.14 ..	58/10	55/10	52/10	49/10
II. c.1.2.15 to c.1.3.14 ..	58/10	55/10	52/10	49/10
III. c.1.3.15 to c.2.0.0 ..	55/10	52/10	49/10	46/10
IV. c.2.0.1 to c.2.0.14 ..	49/10	46/10	43/10	40/10

U.L.=Under Grade A measurements.

U.F.=Over Grade C. measurements.

The price for partly black pigs between c.1.1.14 and c.2.0.14 will be 5/- per cwt. below the relevant grade price.

Authorised cuts :—

- (a) Broken ham (dry, shank and/or shell bone break)—5 per cent of the gross value of the carcase.
- (b) Broken ham (wet break)—12½ per cent of the gross value of the carcase.
- (c) Sholder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase weighing between c.1.1.14 and c.2.0.14 is condemned and the existence of disease could not reasonably have been known to the producer at the time of slaughter the appropriate grade price shall apply. If the carcase is wholly condemned on account of disease, the existence of which could not reasonably have been known to the producer at the time of slaughter, the relevant Grade B price shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcasses weighing under c.1.1.14 or over c.2.0.14 and (b) pigs visibly diagnosable as diseased before slaughter and subsequently condemned; emaciated or screw pigs; smelling pig carcasses with definite indications of putrefaction and pig carcasses badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR WILTSHIRE PIGS SOLD ON DIRECT CONTRACT.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for graded pigs delivered in respect of the month of May are as follows :—

Weight Class (Dead Weight).	Grade 1.	Grade 2.	Grade 3.
Under c.1.0.14	52/10	52/10	52/10
c.1.0.14 to c.1.2.7	64/10	60/10	56/10
c.1.2.8 to c.1.2.10	61/10	57/10	53/10
c.1.2.11 to c.1.2.14	59/10	55/10	51/10
Over c.1.2.14	56/10	52/10	48/10

PRICES FOR LIVE PIGS SOLD TO THE PIGS MARKETING BOARD.

The following prices per live cwt. will be paid for live pigs by the Pigs Marketing Board on and from May 1, 1936, until further notice :—

Weight Class (Live Weight).	Grade I.	Grade II.	Grade III.	Unsuitable.
<i>Wiltshire weights:</i>				
c.1.2.0 to c.1.3.14	49/6	47/-	44/6	38/-
<i>Shipping weights:</i>				
c.1.3.15 to c.2.0.0	45/6	43/-	—	38/-
c.2.0.1 to c.2.1.14	43/-	40/6	—	38/-
c.2.1.15 to c.2.2.7	40/6	38/-	—	35/-
c.2.2.8 to c.2.2.21	37/-	34/6	—	31/-

(The standard price, exclusive of bonus, for bacon pigs sold by contract in Great Britain during May is 11/4 per score dead weight, equivalent to 63/6 per cwt.).

These prices do not apply to live pigs outside the above weights, live pigs intended for breeding, live boars, live suckled sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside these weights can be sold only to the Board.

AUTHORISED DEDUCTIONS.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 1/-.

In addition to this amount, a deduction not exceeding 6d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6 per pig for marketing charges.

COST OF STANDARD PIG RATION.

For the sixteen weeks' period ended 18th April, the average retail cash price per cwt. of the standard ration, as calculated by the Ministry, was 6/11½. This price was used, together with the realised prices of bacon and hams and of fresh meats over a set period, to determine the standard price of pigs for May.

The ration upon which the feeding cost is based is as follows :—

Barley Meal	30%
Maize Meal	40%
Pollards (White)	20%
Extracted Soya Bean Meal	5%
Meat and Bone Meal (60% Protein)	5%

GRADING STATISTICS.

Table showing the percentages of pig carcasses falling within the weight and grade classes indicated during March, 1936 :

GRADE A.				GRADE B.				GRADE C.				TOTAL.
1	2	3	4	1	2	3	4	1	2	3	4	
19.53	14.01	1.80	.32	14.06	16.27	2.60	.57	5.12	7.98	.92	.20	83.38
UNGRADED CARCASSES.												
Under Grade A measurements. U.L.	Over Grade C. measurements. U.F.	Wholly condemned. U.	Wholly black injured or damaged. U.	Overweights Underweights etc. X.	Partly black. Y.							
.08	3.05	.08	1.12	12.22	.07							16.62
TOTAL												100%

The above figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry. The volume of trade in March continued the seasonal upward trend that had been

arrested in the previous month. The average price paid for each carcase, less deductions for levy and contribution charges was £4 9s. 2d., a reduction of 1d. on the February price. The average price per cwt. was 1/1 firmer at £2 15s. 9d., while the average weight showed a further reduction of 2 lbs. at c.1.2.13.

The following table gives the result of an analysis of the purchase and grading statements furnished by Wiltshire bacon curers in respect of live pigs delivered on direct contract by producers during the month of March, 1936 :—

Weight Class.	Grade 1 %	Grade 2 %	Grade 3 %	Unsuitable %	Total %
Under c.1.0.14	1.13	.64	.49	—	2.26
c.1.0.14 to c.1.2.7	41.28	39.06	12.63	.21	93.18
c.1.2.8 to c.1.2.10	.25	.70	.46	—	1.41
c.1.2.11 to c.1.2.14	.21	.53	.53	.04	1.31
Over c.1.2.14	.18	.81	.85	—	1.84
Total	43.05	41.74	14.96	.25	100

PRICES.

The average price per cwt. in respect of these deliveries works out at 60/8, after making allowance for levy deductions. The average weight works out at c.1.1.14 per pig, the net average price per pig being £4 3s. 2d.

GROCERS' AND ALLIED TRADES EXHIBITION, MANCHESTER.

Arrangements were made by the Ministry in co-operation with the Pig Industry Council for Northern Ireland, to stage an exhibit of Northern Ireland pig products at the Grocers' and Allied Trades Exhibition held at Belle-Vue, Manchester, from the 21st April to 2nd May. The exhibit consisted of branded produce supplied by seven Northern Ireland bacon curers and included Northern Ireland roll bacon, Wiltshire cured sides, ham and lard. The display proved of great interest to the trade and the public and was an undoubted success. During the exhibition about 2,400 samples of bacon, ham and lard were sold and an illustrated leaflet on the Northern Ireland bacon curing industry was freely distributed.

THE AGRICULTURAL MARKETING (REMOVAL OF PIGS) REGULATIONS (NORTHERN IRELAND), 1934.

In pursuance of its powers under the above-mentioned regulations the Ministry has decided that as and from Monday, the 11th May, 1936, permits for the shipment of live pigs to Great Britain shall be restricted to the following descriptions of pigs:—

- (a) Stores or porkers each of which is under 1 cwt. 0 qrs. 0 lbs. live weight;
- (b) "sucked" sows;
- (c) boars.

WHEAT ACT, 1932.

ADVANCE PAYMENT TO REGISTERED GROWERS FOR 1935/36.

The Wheat Commission made an advance payment to 29,600 registered growers on the 25th April. The payment was at the rate of 2s. 9d. per hundredweight (12s. 4½d. per quarter), in respect of 6,971,300 hundredweights (1,549,200 qrs.) of wheat vouched for by 42,906 wheat certificates delivered to the Commission between 25th January and 3rd April, 1936. The aggregate amount of the advance was approximately £958,500. No further payment will be made in respect of these certificates until September, 1936, when such balance as may become due will be paid.

The Commission hope to make an advance payment on one more occasion during the current cereal year. The date by which wheat certificates will have to be delivered to qualify for this payment, and the date of the payment, will be announced in due course.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935.

The latest returns received from the Cattle Committee show that the total amount paid to Northern Ireland owners up to and including 2nd May was £425,207 5s. od., and the total number of animals involved was 202,159, sold on a live weight basis. The average payment made per head of cattle was, therefore, £2 2s. 1d.

During the week ended 2nd May payments made to Northern Ireland owners were in respect of 1,697 steers, 536 heifers, and 79 cow heifers. The total weight of these animals was 18,986 cwt., and their total realised value was £30,450 3s. od. The average weight of each beast was 8 cwt. 0 qrs. 24 lbs., the average price per live cwt. was 32/1, and the average amount of subsidy obtained for each animal was £2 1s. 1d.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES

THE LAND.

TURNIPS.—The sowing of turnips will claim attention on most farms at this time. Turnips braird most satisfactorily when the seed is sown on clean land in fine tilth, which has not been allowed to become too dry during working operations. If no more drills are opened than can be manured, closed and sown on the same day, the moisture in the soil will be conserved and there will be a better chance of obtaining a good braird and of lessening the risk of attack by the turnip “fly” than where a big area is drilled and the drills allowed to become dry before sowing. Moreover, when a small area is sown at a time, the whole crop will reach the singling or thinning stage at different periods, thus facilitating the carrying out of this work.

Where a moderate application of farmyard manure is given, a dressing of a phosphatic manure is all that is required in the way of artificials for the turnip crop. From 4 to 6 cwt. per statute acre of superphosphate, semsol, basic slag, or Gafsa rock phosphate is suitable. Phosphatic manure promotes root development in the young plants and is, therefore, of great value in obtaining steady and satisfactory growth after brairding has taken place. The manure should be applied so that it will soon be reached by the roots of the young plants, and not all scattered in the bottoms of the open drills. If farmyard manure is not available, a dressing per statute acre of from 1 to $1\frac{1}{2}$ cwt. sulphate of ammonia and from $1\frac{1}{2}$ to 2 cwt. 30 per cent. potash salts should be applied in addition to 6 cwt. of a phosphatic manure.

On land subject to “finger and toe” disease, basic slag or Gafsa rock phosphate should be used in preference to superphosphate, and farmyard manure omitted unless such manure has been produced by stock which were not fed on roots affected with the disease. Basic slag should not be mixed with sulphate of ammonia, but should be applied separately; if mixed, there will be a serious loss of the fertilising properties of the sulphate of ammonia. Gafsa rock phosphate and sulphate of ammonia may be mixed prior to application, but the mixture should be applied immediately after mixing.

Advice regarding the varieties of turnips which are likely to produce high yields may be obtained from the Agricultural Instructor for the district.

CABBAGE AND MANGELS.—The advice given in last month’s Notes regarding the sowing of a small area of these crops may again be repeated. Cabbage will supply succulent food during autumn, when grass is becoming scarce, while mangels provide useful feeding in late spring, when the supply of turnips is exhausted. If not already done,

these crops should be sown as soon as possible. Steeping mangel seed for about 24 hours in water before sowing hastens germination and promotes quicker brairding. The "Early Drumhead" variety of cabbage is the most suitable for farm use, while the Red Intermediate type of mangel has given the heaviest yields in trials carried out in Northern Ireland. Marrow-stem and thousand-headed kale can also be grown for the production of autumn and early winter green food. These crops require similar treatment to cabbage in the way of manuring and rate of seeding, but the plants need not be singled, but merely thinned in the rows.

POTATOES.—Crops of early varieties of potatoes will benefit considerably by occasional grubbing and moulding up. In the case of backward crops, top-dressing with sulphate of ammonia, applied at the rate of from $\frac{3}{4}$ to 1 cwt. per statute acre, will promote quicker growth of the haulms or "tops." The manure should not be allowed to come in contact with the young haulms, but should be sown in the furrows between the drills before the crop is moulded up.

OATS.—Oat brairds, following lea, should be watched now for attacks of leather-jacket grubs. If the brairds are turning yellow or failing in patches, attacks of these pests should be suspected and a poisoned bait, made up of 1 lb. Paris Green and 28 lb. bran, applied at this rate per acre immediately. The Paris Green should be mixed dry with the bran and the mixture moistened with water, or water to which a little treacle has been added. The bait should be scattered as evenly as possible over the braird, preferably late in the evening. It is essential that the bait be applied immediately the first signs of attack are observed and before extensive damage to the crop has occurred; delay in applying the bait may result in serious loss and injury being caused to the crop. As Paris Green contains arsenic, it is extremely poisonous, and the greatest care should be exercised in its use. Under no circumstances should the mixed bait be left where poultry or other farm stock may have access to it. All vessels in which the bait has been mixed, or which may have come in contact with it, should be thoroughly cleaned before being used again; the use of old vessels which can be discarded after the bait has been applied is recommended.

In addition to the Paris Green treatment, heavy rolling and the application of about 1 cwt. per statute acre of a quick-acting nitrogenous manure, such as nitrate of soda, also aid the crop in combating an attack. Further particulars regarding the control of leather-jacket grubs are given in Leaflet No. 22.

WEEDS.—The destruction of charlock ("preshaugh"), where present in corn and flax crops, should receive attention before the weeds reach the flowering stage. Spraying with a solution of copper sulphate (bluestone) provides the most satisfactory method of control.

Full particulars regarding the control of charlock in oats, barley and flax are given on page 30 of this report, where Leaflet No. 38 is reproduced.

Ragwort or "benweed" in pasture can be kept in check by grazing sheep on the land now. Sheep will eat ragwort readily when the plants are young, but once the hard, coarse flowering stems have developed, they will leave the weeds untouched. Where it is not possible to graze sheep on the land, ragwort may be eradicated by hand pulling when the ground is soft. Persistent cutting will also keep these weeds in check, but pulling is to be preferred. Information relating to the eradication of ragwort is given in Leaflet No. 55.

PASTURES.—Newly laid down pastures should not be grazed too closely early in the season, as this may check seriously the development of the permanent species of grasses and clovers and result in the sole remaining thin and in a backward condition throughout its life.

SEASONAL LIVESTOCK NOTES.

OX-WARBLE FLY.—In accordance with the Ox-Warble Fly Order, the third application of a suitable Derris wash should have been applied to cattle between the 10th and 17th May, while the fourth and final dressing should be given between the 7th and 14th June. Readers are reminded that it is an offence against the Order if the dressings are not given during the periods specified. Moreover, if dressing is not done during the proper time, some of the maggots will escape and produce a new brood of warble flies—an occurrence which the Order is designed to prevent. All cattle owners should, therefore, in their own interests, comply strictly with the terms of the Order.

Three Derris preparations are recommended for dressing cattle, namely, "Polvo," "Cooper's Warble Fly Powder," and "Paragad," and supplies of these can be obtained from most chemists. Particulars regarding the preparation and application of these washes are given in Leaflet No. 64 and in Circular No. 13.

CATTLE.—Where it is intended to fatten cattle on grass, it should be noted that, as young grass is particularly rich in protein matter, an allowance of starchy foods such as maize meal or crushed oats, or a mixture of both, will supply all the additional nutrients necessary. The feeding of expensive cakes or meals, rich in protein, is a wasteful practice under such circumstances. Similarly, with dairy cows, good young grass will supply sufficient food materials to maintain the yield of the average milker, and it is only in the case of exceptionally heavy milking cows, or where the pasture is of poor quality, that the feeding of concentrates during early summer is necessary.

WATER SUPPLY ON PASTURE.—At the commencement of the grazing season, the water supply for cattle on pastures should receive attention, so that an adequate supply of fresh, clean water will be provided

throughout the summer months. Watering places should be thoroughly cleaned out and rails erected, if not already provided, to prevent the cattle from standing in and fouling the water.

BREEDING BULLS.—During the summer, bulls should be allowed out on grass where facilities permit, but a suitable mixture of meals should be fed in addition to the pasture. A mixture of equal parts crushed oats, maize meal and bran is suitable for this purpose. Advice relating to the management of breeding bulls is given in Leaflet No. 61.

SHEEP.—The clipping of sheep of the lowland breeds will commence during this month. To prevent waste and to obtain best prices for wool, clipping should be done under as clean conditions as possible, the fleeces graded properly, and loose wool and dirty locks kept separate from fleece wool. The sheep should be kept on a bare pasture during the night before clipping commences, as there is a risk of causing injury to heavy, fat sheep during clipping if they have full stomachs. Clipping should be done on a door or waterproof cart cover to prevent foreign material getting into the wool. All foreign substances such as leaves, pieces of stick, etc., already in the fleece, should be removed. When shorn, the fleece should be spread out, the edges folded over lengthwise, rolled up neatly and tied with a band made of wool. Ordinary string or binder twine should not be used for tying the fleeces, as it is difficult to remove from the fleece, and, if left in, portions of string mixed with the wool cause trouble and loss. If the wool is not to be marketed at once, it should be stored in a dry, airy place, free from dust and vermin. Further information relating to the care and handling of wool is given in Leaflet No. 23.

At shearing is a convenient time to examine the ewes' mouths and feet. Those having "broken" mouths should be specially marked and fattened off while rearing their lambs.

PIGS.—Sows and young pigs should be allowed out on fresh, clean pasture as much as possible at this time of year. Free access to good pasture promotes good thriving and is also a useful aid in preventing anaemia or bloodlessness from developing. This ailment is a predisposing cause of the condition known as "blows," which is responsible for serious losses of young pigs on many farms. A convenient and effective treatment for anaemia is given in Leaflet No. 45—The Breeding and Rearing of Pigs.

SEASONAL GARDEN AND ORCHARD NOTES.

SPRAYING OF APPLE TREES.—The third application of Bordeaux mixture to prevent apple scab disease should be given to apple trees immediately after the petals have fallen. If aphides, capsid bugs or apple suckers are present, 6 fluid oz. of nicotine, or 8 fluid oz. of nicotine sulphate, should be added to each 40 gallons of the spray mixture.

VEGETABLES.—Well-grown plants of broccoli, Brussels sprouts, cauliflower, savoys and borecole (curley kale) should be planted out now in well-cultivated, moderately rich soil. The ground for broccoli and Brussels sprouts should be made firm before planting. Early-sown peas should now be staked, but before this is done a little soil should be raised on each side of the rows. It is important to stake peas before they actually need support.

Celery should now be ready for planting out in trenches or, in the case of the self-blanching kinds, in well-manured beds. This crop requires liberal feeding and should also be kept well watered during dry weather. Early-sown parsnips, beet and turnips should now be thinned. If attacks of carrot fly are anticipated, the thinning of carrots should be postponed until later. In the meantime, the carrot ground should be treated with crude naphthalene by sowing it broadcast at the rate of 1 cwt. per acre. The ground between growing vegetables should be kept frequently hoed.

FLOWERS.—Annual flowering plants such as Clarkia, etc., should be thinned so that they are from 8 to 10 inches apart.

SEASONAL POULTRY-KEEPING NOTES.

MANAGEMENT OF GROWING PULLETS.—Particular attention should be given to the pullet flock at this time so that they may have every opportunity of developing naturally into strong, robust birds. To this end, good, clean free range, adequate housing accommodation and suitable feeding contribute. Free range should be provided and overcrowding in houses rigidly avoided, as overcrowding is one of the chief causes of unsatisfactory development. The slatted floor type of house is excellent for the accommodation of growing pullets. The house should be placed in a field of fresh pasture and moved every day, if possible, so as to bring a new portion of the field into range daily and also to avoid a surplus of droppings on particular areas.

FEEDING THE PULLETS.—The nature of the feeding at this period of development is important, as it influences the future well-being of the birds. A meal mash of plain, wholesome food without too much protein supplement and a daily feed of grain, are satisfactory. The feeding should be such as will encourage the production of large frames, instead of forcing the birds to reach laying maturity before growth of body and the building up of bodily reserves of vigour are completed. A suitable mash for growing pullets is :—

3	parts	by	weight	bran.
3	„	„	„	pollard.
2	„	„	„	maize meal.
1	part	„	„	Sussex ground oats.
$\frac{1}{4}$	„	„	„	fish meal, or meat meal.

Where separated milk is available, it can be used instead of the fish meal or meat meal. If the pullets are being fed on the dry mash system, it is advisable to close the hoppers for a period in the forenoon and afternoon of each day.

COCKERELS.—Young cockerels should not be allowed to remain with the pullets, but should be kept in a confined run and fed on a fattening mash so as to get them ready for sale as soon as possible.

CARE OF EGGS.—To get eggs of first quality for marketing, particular care is necessary from this time of year onwards. Broody hens cause an immense amount of harm to eggs when allowed to sit in the nests. The broodies should be removed as soon as they become broody and placed in a coop, where they should be fed on the ordinary laying mash. This method of management will prevent the broodies injuring the quality of the eggs and will soon bring them back to production again.

The production of fertile eggs during the summer months is a menace to the egg export trade, as such eggs deteriorate in quality very rapidly during warm weather. With good management of the laying flock, however, there should not be any fertile eggs produced. If there are no male birds running with the layers, there will be no fertile eggs, and, now that the breeding season is over, there is no necessity for having male birds with laying hens. Such birds should be removed from the laying flock, and, if not required for future breeding, sold off. It has been proved conclusively that unmated birds lay just as well as those with which males are permitted to run, and, accordingly, the removal of the males not only ensures that eggs of good keeping quality will be obtained but that the cost of production will be lowered, since the cost of feeding the cockerels can be eliminated.

Frequent collection of eggs from the nests, storage in a cool place, and marketing frequently, twice weekly if possible, are of primary importance, if first quality eggs are to be obtained. During summer, eggs should be removed from the poultry house as collected and stored in a cool room. Further hints on the production of eggs of first quality are given in Leaflets Nos. 27 and 57. Leaflet No. 27 gives special hints on the keeping of eggs clean.

FEEDING OF LAYING HENS.—Except in the case of heavy laying pullets which have been in production since last autumn, the proportion of maize meal in laying mashes should now be reduced; the feeding of an excessive quantity of maize during warm weather tends to make older birds overfat, a condition which may lead to many derangements. Where the hens are on free range, the proportion of protein foods in the mash can also be reduced—about 5 per cent. of such foods in the mixture being sufficient at this season. If separated milk is available, there is no necessity to include any protein foods in mashes for laying hens.

REARING OF TURKEYS.—It is of the utmost importance to rear turkeys on clean, fresh ground and to give the birds unrestricted free range after the first week. Green food, such as finely chopped nettles, onion tops, chives, lettuce, etc., should be included in the mash during the first few weeks. If these fundamentals are neglected, it is impossible to make a success of turkey raising on the average farm. Useful hints on the rearing, feeding and management of turkeys are given in Leaflet No. 37.

THE DESTRUCTION OF CHARLOCK.

Charlock or "preshaugh" is a troublesome weed of tillage land. While it occurs in all tillage crops, the usual cultivations and weedings necessary for potatoes and turnips keep it in check in these crops, and it is chiefly in the case of oats, barley and flax that there is difficulty in dealing with the weed. It is not usually prevalent in autumn-sown oats or wheat.

Charlock produces enormous quantities of seed (an average is about 2,000 seeds per plant), which is capable of remaining dormant in pasture fields for many years, and of giving rise to a further crop of weeds when the field is again ploughed. Charlock seed closely resembles turnip seed in appearance, and does not germinate unless it is near the surface of the soil. Consequently, in fields where seed has been shed, successive crops of seedlings will follow each cultivation operation, provided sufficient time is allowed to elapse. Where possible, advantage should be taken of this fact to eradicate the weed. For example, in the preparation of a charlock-infested field for turnips, the soil should be cultivated at intervals prior to sowing time.

Charlock is an annual plant, and reproduces entirely by seed. Knowing this, the farmer should ensure that oats, flax and barley selected for sowing are free from weed seeds. If charlock is already present in the growing crops, every endeavour should be made to prevent the plants shedding their seed.

REASONS WHY CHARLOCK SHOULD BE DESTROYED.

Charlock grows more rapidly than either corn or flax plants, and consequently tends to smother these crops. It draws freely on the stores of food and moisture in the soil, so that the crops are robbed and the yields appreciably reduced. When the corn is threshed there is always a risk of some of the charlock seed remaining in the dressed corn, so if this is being used for seed there is every likelihood of the weed being spread to clean land. A further disadvantage of charlock in corn and flax is the presence of the matured plants in the straw after the crops are harvested. Charlock stems in oat straw lower its value for feeding, while in the case of flax they make subsequent handling of the produce more difficult and expensive. Finally,

charlock is an agent in the continuance and spread of certain serious pests and diseases of farm crops. For example, "finger-and-toe" disease of turnips may be spread and perpetuated by it, while the turnip "fly" is largely dependent upon charlock for food until the turnip seedlings are ready.

When these injurious effects are considered, it is obvious that the presence of charlock in a crop calls for immediate action.

DESTRUCTION OF CHARLOCK IN CORN.

Young charlock plants are very similar in appearance to young turnip plants. Farmers should learn to identify the weed at this stage, as early action may prevent the necessity for more expensive treatment at a later stage. Thus, if a braird of corn is harrowed during fine weather when the weeds are small, the majority of the weed plants will be killed, and even if this operation induces further seeds to germinate, the corn will have sufficient advantage in growth to smother them out. Where, however, the charlock has been allowed to grow unchecked, the most successful and least expensive method of destruction is to spray with a solution of copper sulphate (bluestone).

PREPARATION AND USE OF COPPER SULPHATE SOLUTION.—When spraying is done under suitable conditions, a 3 per cent. solution of copper sulphate will suffice. This solution may be conveniently prepared as follows:—

Put 38 gallons water (rain water for preference) in a 40 gallon barrel. Dissolve 12 lb. copper sulphate in 2 gallons of boiling water and transfer this to the barrel. Stir, and the mixture is ready for application.

Lime or washing soda must not be added to the copper sulphate solution for spraying charlock; wooden vessels only should be used, as it will destroy those made of zinc or iron. The solution is poisonous to live stock.

QUANTITY TO APPLY.—When spraying is done before the weeds have got very large, 60 gallons of copper sulphate solution will be sufficient for one statute acre. When, however, spraying has been delayed until the flowering stage, it is advisable to use from 70 to 80 gallons per statute acre.

TIME TO SPRAY.—The best results will usually be obtained by spraying either:—

- (1) During the early stages and before the rough leaves have formed a flattish rosette, or
- (2) When the flowering stem has lengthened and just before flowering occurs.

The charlock is readily destroyed by the spray during the seedling stage, and it is much better to spray at this stage if possible. At a later stage in the growth of the weed, when the rough leaves have formed a rosette, spraying is sometimes not entirely successful. This is due to the growing bud being protected, so that while the spray kills

the outer leaves, the bud is not destroyed, growth continues and the plant flowers and ripens its seed in due course. Many farmers do not realise the extent to which charlock is present until the familiar yellow-coloured flowers have appeared, and the field becomes a "sea of yellow." Spraying, even at this stage, will usually give good results, provided the flowers have not started to fall off. It is useless spraying when the flowering stage has passed, as the seeds will not then be killed.

It should be realised that the longer the weeds are permitted to grow the more harm they will have caused to the crop, and that they cause more damage while the crop is in the early stages of growth than later. Moreover, the more the spraying is delayed the greater is the likelihood of causing damage to the crop when spraying is being done. It will be obvious, therefore, that early destruction is advisable.

EFFECT OF SPRAY ON CORN.—The tips of the leaves turn brown after spraying, but when spraying is done as advised no permanent injury to the corn may be anticipated. Fields sown down with grass and clover seeds may also be sprayed with safety.

If the braird of corn is weakly and backward by reason of the effects of the charlock or otherwise, the addition of from 2 to $2\frac{1}{2}$ stones of nitrate of soda to the barrel of copper sulphate solution will have a beneficial effect in assisting the crop to overcome the set-back.

DESTRUCTION OF CHARLOCK IN FLAX.

Copper sulphate solution may also be used for the destruction of charlock in flax. It must be remembered, however, that flax is more readily injured by copper sulphate than is the case with oats, and, accordingly, care and judgment are necessary in the application of the spray. When flax is sprayed under adverse conditions, growth may be seriously checked and the plants permanently injured by quantities of the spray adhering to them. The important precautions to take in the spraying of flax are:—

- (1) that spraying is done before the flax plants exceed 3 or 4 inches in height. The flax plants are not so liable to be injured at this early stage as later, and, moreover, the charlock plants will be at a stage when they are most readily killed;
- (2) that spraying is done only when the crop is growing satisfactorily. Spraying should not be done when weather conditions are unfavourable to growth;
- (3) that the strength of the copper sulphate solution does not exceed $2\frac{1}{2}$ per cent. This strength will be sufficient to destroy charlock under the conditions specified and a stronger solution is liable to cause permanent injury to the flax.

A $2\frac{1}{2}$ per cent. solution is made by dissolving 10 lb. copper sulphate in 40 gallons water. The spray may be applied to flax at the rate of 60 gallons per statute acre.

In addition to destroying charlock, the spray seriously checks and sometimes kills other weeds such as spurrey and chickweed in flax brairds, but has little injurious effect on redshank.

As in the case of oats, the addition to the copper sulphate solution of about 2 stones of nitrate of soda to the barrel has been found beneficial on weakly brairds where charlock has seriously checked the growth of the crop.

TYPE OF SPRAYER RECOMMENDED.

An ordinary cart potato sprayer is quite suitable for spraying charlock. It is necessary to use a machine that is capable of delivering the spray under good pressure, and nozzles that give a fine, misty spray should be fitted. The object is to cover each weed uniformly with the spray. A cool, dry day is most suitable for charlock spraying, and best results will be secured when rain does not occur for a few hours afterwards. If rain follows soon after application, a second spraying may be necessary.

Where small areas are to be sprayed, an ordinary knapsack sprayer may be used, but for larger areas this machine is not recommended, as with it the operation is too tedious and expensive, and, moreover, there is greater risk of missing some of the weeds.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

The Ministry's Educational Exhibit will be staged on the 27th May and the three following days at the Show of the Royal Ulster Agricultural Society at Balmoral. This Exhibit, which will deal with the more important branches of agriculture, horticulture, poultry-keeping and forestry, will contain many features of special interest to farmers. An outline of the exhibits which will be included, is given in an Article on page 10 of this report.

The fourth dressing of a suitable Derris wash for the destruction of warbles in cattle should be applied between the 7th and 14th June. Neglect to dress infested cattle within the periods specified is an offence against the Warble Fly Order.

The summer sheep dipping period will extend from 15th June to 15th August. During that period all sheep must be dipped twice allowing an interval between the two dippings of not less than seven days or more than fourteen days. See article on page 37.

Watch out for attacks of leather-jacket grubs in oat brairds following lea ground. Apply the Paris Green and bran bait *immediately* an attack is observed. Delay in applying the bait may result in serious damage to the crop with consequent loss. See page 25 for details.

Destroy charlock (" preshaugh ") in oats and flax by spraying with copper sulphate solution before the weeds reach the flowering stage. Read the article of page 30 of this report.

Provide ample accommodation for the growing chickens and free range for the developing pullets. Fatten and sell off the cockerels, not intended for breeding, as soon as possible.

Give particular attention during the summer months to the quality of eggs for marketing. Read Leaflets Nos. 27 and 57 for useful hints on this matter.

Copies of leaflets mentioned in this Report are obtainable free, on request.

COLORADO BEETLE RESTRICTIONS.

FURTHER ACTION TO PROTECT THE NORTHERN IRELAND POTATO INDUSTRY.

The Colorado Beetle, which so far has not made its appearance in Northern Ireland, constitutes one of the greatest menaces to the potato crop. The Beetle, when it appears, strips potato haulms completely of leaves, and in this way prevents the formation of tubers and destroys the crop. To control the pest, if it once became established, would involve the annual spraying on several occasions of potato crops with Lead Arsenate or some similar insecticide, and such spraying would materially increase the cost of cultivation. Even, however, if it were to prove practicable to confine the pest to a particular district, which in view of Continental experience, is certainly doubtful, its establishment in any part of Northern Ireland would undoubtedly irreparably damage the potato export trade. It is, therefore, obvious that every possible precaution must be taken against the introduction of the pest.

The Beetle has been prevalent in France for many years, and Orders have been in force both in Northern Ireland and in Great Britain, designed to minimise the risk of the insect making its way to these countries with French produce. Briefly, the restrictions imposed on French produce are :

- (a) The importation of potatoes is prohibited.
- (b) In the case of imports of living plants each consignment must be accompanied by an Official Health Certificate, including a statement to the effect that the Beetle has not been known to exist within a distance of 50 kilometres from the place where the plants were grown.
- (c) Consignments of raw vegetables and cider apples during the period between April 21st and October 14th in any year must also be accompanied by the special statement referred to above.

During last year the Beetle made its appearance in Belgium, and thirty outbreak centres were established in four provinces in that country. The steps to be taken to safeguard United Kingdom interests in view of this appearance of the Beetle in Belgium have

been the subject of correspondence and discussions between the Ministry of Agriculture for Northern Ireland and the Ministry of Agriculture and Fisheries, London, and conversations with the Belgian authorities have also taken place. As a result identical Orders, which came into operation on 1st May, 1936, have now been issued by the two Ministries, and these Orders apply, with certain modifications, to imports of produce from Belgium, the restrictions already applicable to similar imports from France.

In extending these provisions to Belgium produce the following modifications have, however, been made:—

- (a) Potatoes from Belgium may be admitted if they are accompanied by an official Health Certificate, including the 50 kilometre Colorado Beetle Certificate.
- (b) In the case of consignments of flower-bulbs, cucumbers and mushrooms, the official Health Certificate need not include the special Colorado Beetle Certificate.
- (c) In certain circumstances importations of living plants, raw vegetables or cider apples, *but not potatoes*, may be permitted under general licence issued by the Ministry concerned.

The relaxations indicated at (b) and (c) also apply to imports from France, but the total prohibition of the importation of potatoes from France is maintained.

Certificates of origin for cucumbers and mushrooms, grown in countries, other than France and Belgium, will no longer be required.

Further information as to the Northern Ireland Order—The Importation of Plants (Northern Ireland) (Amendment) Order of 1936—may be obtained from the Secretary to the Ministry of Agriculture for Northern Ireland, Stormont, Belfast.

ASSISTANT CREAMERY MANAGER'S CERTIFICATE.

The Ministry of Agriculture proposes to hold an examination in June, 1936, in connection with the award of the "Assistant Creamery Manager's Certificate." Persons desirous of attending the examination should apply as soon as possible to the Ministry of Agriculture, Stormont, Belfast, for the requisite application form and syllabus. The closing date for the receipt of applications is 30th May, 1936.

SCHEME FOR THE BLOOD TESTING OF POULTRY FOR BACILLARY WHITE DIARRHOEA.

Poultry-keepers who desire to have birds blood tested are reminded that early application should be made to the Instructor in Poultry-keeping for their county or district, and, in any case, not later than the 1st August next. Applications received after that date cannot receive the Instructor's attention until all previous applications have been dealt with. Copies of the Scheme, which gives full particulars regarding the conditions under which testing is carried out, fees, etc.,

and of the prescribed form of application, may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, or from the Instructor. The following is a list of the names and addresses of the Instructors in Poultry-keeping :—

COUNTY.	NAME AND ADDRESS.		
Antrim North) ..	Miss A. M. Nedwill	{	c/o The Secretary, County Antrim Committee of Agriculture, County Courthouse, Belfast.
Do. (South) ..	„ A. G. Pollock		
Armagh	Miss A. G. English,	c/o.	The Agricultural Organiser, County Armagh Committee of Agriculture, Russell Street, Armagh.
Down (Mid) ..	Miss L. Walters	{	c/o. The Agricultural Organiser, County Down Committee of Agriculture, Northern Bank Chambers, May Street, Belfast.
Do. (South) ..	„ W. McMullen		
Do. (North) ..	„ E. F. Anderson		
Fermanagh ..	Miss A. M. Callery,	c/o.	The Secretary, County Fermanagh Committee of Agriculture, Court- house, Enniskillen.
Londonderry (North) ..	Miss E. McCluggage	{	c/o. The Secretary, County London- derry Committee of Agriculture, Courthouse, Coleraine.
Do. (South) ..	„ E. E. Clarke		
Tyrone (North) ..	Miss M. H. Davidson	{	c/o The Secretary, Co. Tyrone Committee of Agriculture, Court- house, Omagh.
Do. (South) ..	„ M. C. J. Davidson		

COTTAGE AND GARDEN PRIZE SCHEME.

The Scheme operates in three counties, viz., Antrim, Fermanagh and Down, and bona-fide cottagers resident in rural districts in these counties are eligible to take part in the competitions.

Further particulars regarding the Scheme and copies of the prescribed entry forms, which must be lodged not later than the 20th June, may be obtained from the Secretary or Agricultural Organiser of the County Committees of Agriculture concerned, whose names and addresses are given below :

COUNTY ANTRIM.	A. B. Clarke, B.A., Secretary County Antrim Committee of Agriculture, County Courthouse, Belfast.
COUNTY FERMANAGH.	W. T. McClintock, B.Agr., Agricultural Organiser, County Fermanagh Committee of Agriculture, Courthouse, Enniskillen, County Fermanagh.
COUNTY DOWN.	J. L. McWhinney, A.R.C.Sc.I., Agricultural Organiser, County Down Committee of Agriculture, Northern Bank Chambers, May Street, Belfast.

FIXTURE LIST OF AGRICULTURAL AND HORTICULTURAL SHOWS FOR THE YEAR 1936.

Title of Society or Association.	Centre.	Date.
COUNTY ANTRIM.		
Royal Ulster Agricultural Society	Balmoral	27th, 28th, 29th, 30th May.
Ulster Horticultural Society	Belfast	18th & 19th Nov.
Antrim Agricultural Society	Antrim	10th June
Cushendall Agricultural Association	Cushendall	14th July
County Antrim Agricultural Association	Ballymena	17th June
Glenarm and District Agricultural Society	Glenarm	15th July
Templepatrick Working Men's Association (Horticulture)	Templepatrick	21st August
North Antrim Horticultural Association	Ballymoney	27th August
North Antrim Agricultural Association	Ballymoney	23rd June
Ballymena Horticultural Society	Ballymena	23rd September
CO. ARMAGH.		
County Armagh Agricultural Society	Portadown	3rd June
CO. DOWN.		
Banbridge Farming Society	Banbridge	18th June
Bangor Horticultural Society	Bangor	19-20th August
Kilkeel Agricultural Society	Kilkeel	Not yet available
Castlewellan Agricultural and Industrial Association	Castlewellan	16th July
Waringstown Horticultural Society	Waringstown	28th August
Newtownards Horticultural Society	Newtownards	3rd September
CO. LONDONDERRY.		
North Derry Agricultural Association	Coleraine	11th June
North West of Ireland Agricultural Society	Londonderry	24-25th June
Eglinton Gardening Society	Eglinton	23rd July
Garvagh Women's Institute	Garvagh	6th August
Dungiven Young Farmers' Club	Dungiven	11th August
Coleraine and District Horticultural Society	Coleraine	4th September
Culmore Horticultural Society	Culmore	22nd August (Provisional)
City of Derry and District Horticultural Society	Londonderry	9th September (Provisional)
CO. FERMANAGH.		
Fermanagh Farming Society	Enniskillen	3rd September
CO. TYRONE.		
Clogher Valley Agricultural Society	Clogher	29th July
Tyrone Farming Society	Omagh	1st July
Irish Goat Society	Trillick	15th July

SHEEP DIPPING (NORTHERN IRELAND) ORDER, 1932.

The attention of sheep owners is directed to the provisions of the Sheep Dipping (Northern Ireland) Order, 1932, which requires that during the period 15th June to 15th August all sheep in Northern Ireland must be dipped on two occasions separated by an interval of

not less than seven or more than fourteen days. The only exceptions to this regulation are sheep exempted by the Local Authority owing to the fact that they are to be exhibited or for any other special reason, and also sheep which are to be slaughtered in Northern Ireland during the compulsory dipping period, provided they are kept separate from sheep which have been dipped.

Every sheep owner must give five clear days notice of intention to dip on a form which will be supplied to him by the local police. In County Fermanagh, where all sheep are dipped at public baths, formal notice of intention to dip is not required.

All sheep, with the exception of lambs less than nine months old, must, prior to dipping, have been clipped in the current year.

Sheep must be dipped by thoroughly immersing them, including the head and ears, in a sheep dip approved by the Ministry, and the immersion, except as regards head and ears, must be for not less than one minute. In this connection, it should be observed that sheep dips on sale in Northern Ireland, and approved by the Ministry, carry labels setting out the terms of the Ministry's approval and giving particulars as to the strength at which the particular dips should be used.

Sheep owners are asked to note that if they import sheep into Northern Ireland during the period 15th June to 15th November they must report the fact at once to the local police and have the sheep dipped under the supervision of the local dipping inspector. There are certain exceptions to this rule, particulars of which are obtainable from the police or the sheep dipping inspector. Information regarding the dipping of sheep prior to exposure at fairs, markets, and sale yards may be derived from the same sources.

SCHOLARSHIPS IN AGRICULTURAL SCIENCE.

The Ministry again proposes to offer for competition in the autumn four valuable Scholarships in Agricultural Science. Each is of the value of £95 per annum and is tenable for four years in the Faculty of Agriculture of the Queen's University of Belfast, and successful candidates are afforded the opportunity of securing the most advanced training in agricultural science and of obtaining on the successful conclusion of the course the degree of Bachelor of Agriculture. The value of the scholarships enables the holders to pay their fees and retain a balance for upkeep purposes.

Candidates must be between the ages of 17 and 30 on the 15th of November, 1936, and must have passed the Matriculation examination of the University or its accepted equivalent.

Eligible applicants will be submitted by the Ministry to an examination, the object of which will be to test their knowledge of practical agriculture and their knowledge of elementary science as applied to agriculture.

Further particulars may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, and the prescribed form of application for admission to the examination, duly completed, must reach the Ministry's Offices not later than 15th August, 1936.

FOURTEENTH EGG-LAYING TEST AT STORMONT.

RESULTS TO END OF SEVENTH PERIOD.

The seventh period of four weeks ended on the 17th April, 1936. A further increase in egg production took place during the period, the average production from the Rhode Island Red birds being particularly good. One pen of six Rhode Island Red pullets laid 161 eggs during the 28 days of the period, and, as this performance is an outstanding one, the detailed production of each pullet is given :—

Name and Address of Owner of pen.	Test No. of Pen.	Test Nos. of Pullets.	Number of eggs laid in 28 days.			Test Score Value.
			Super Grade.	First Grade.	Below 1st Grade.	
Mr. T. E. Taylor, Craigavad, Co. Down.	72	427	11	16	—	27
		428	20	8	—	28
		429	1	24	3	25
		430	9	16	—	25
		431	0	26	1	26
		432	1	23	2	24

This pen of birds was bred at the official Pedigree Breeding Station of Northern Ireland.

In the table which follows is given the average egg production per bird during the seventh period, and for the seven periods the test has been in progress. The average production is shown, both on the basis of the 912 birds originally penned and on the basis of the 870 birds which were alive at the end of the seventh period; in other words, the average of the entire original flock and the average of the birds which were alive at the end of the period. Further, the table shows the averages of the total number of eggs laid, and of the number of scoring eggs laid :—

	Average egg production during the seventh period.		Average egg production during all seven periods.	
	Based on entire flock of 912 Birds.	Of the 870 birds alive on 17th April.	Based on entire flock of 912 Birds.	Of the 870 birds alive on 17th April.
Total number of eggs	19.9	20.8	105.3	108.7
Number of scoring eggs i.e., Super grade and 1st grade	18.3	19.1	89.3	92.2

These figures indicate that the position regarding size of egg remains very satisfactory. Only eggs which weigh 2 ounces or more each are now counted for scoring purposes right from the start of the test, and it is seen from the figures in the table that, during the 196 days the test has been in progress, the average total number of eggs below 2 ounces laid by each bird was 16.0 when no allowance is made for deaths, and 16.5 when such an allowance is made. Of the total number of eggs laid since the start of the test, 84.8 per cent. weighed 2 ounces or more each, while only 15.2 per cent. weighed less than 2 ounces each.

Seven birds died during the seventh period. The total number of deaths during the seven periods the test has been in progress is 42 ; this represents an average mortality rate of 4.6 per cent.

The following are the rates of mortality in respect of the different breeds represented :—

Breed.	No. of birds originally penned.	No. of deaths.	Mortality per cent.
White Wyandottes	288	18	6.2
White Leghorns	120	10	8.3
Rhode Island Reds	420	11	2.6
Light Sussex	66	1	1.5
Barred Rocks	6	1	16.6
Buff Rocks	6	1	16.6
Welsummers	6	—	—
Totals	912	42	4.6

The rates of mortality in respect of the different sections in the test are as follows:—

Section.	Designation.	No. of birds	No. of deaths	Mortality.
1	White Wyandottes (Open) ..	180	12	6.7%
2	White Leghorns (Open)	48	3	6.3%
3	Rhode Island Reds (Open) ..	228	3	1.3%
4	Any other Pure Breed	84	3	3.6%
5 (a)	White Wyandottes (Stationholders)	78	3	3.8%
5 (b)	White Leghorns (Stationholders) ..	60	6	10.0%
5 (c)	Rhode Island Reds (Stationholders)	132	4	3.0%
6	Poultry Clubs and Young Farmers' Clubs (Any Breed)	102	8	7.8%

The following are particulars of the leading pens in each Section as at the end of the seventh period:—

SECTION 1.—WHITE WYANDOTTES (OPEN). 30 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of Eggs Laid.			Test Score Value.
			Super Grade.	First Grade.	Below First Grade.	
1	3	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	414	357	77	771
2	11	Mr. J. Hall, Lilac Cottage, Donacloney, Co. Down.	617	117	13	734
3	7	Lieut.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	270	434	76	704

SECTION 2.—WHITE LEGHORNS (OPEN). 8 PENS.

1	37	Mr. J. Waugh, Ballyrickard, Kilwaughter, Co. Antrim.	260	308	86	568
2	34	Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down.	358	199	90	557
3	36	Mrs. J. Warnock, Tower View, Rathgael, Bangor, Co. Down.	174	359	22	533

SECTION 3.—RHODE ISLAND REDS (OPEN). 38 PENS.

1	75	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim.	531	219	33	750
2	70	Miss R. L. Sinclair, Ballybirnie, Holyhill, Strabane, Co. Tyrone.	401	337	78	738
3	59	Mrs. J. McNeill, Drain's Bay, Larne, Co. Antrim.	517	196	21	713

SECTION 4.—ANY OTHER PURE BREED. 14 PENS.

Position.	No. of Pen.	Name and Address of Owner.	Number of Eggs Laid.			Test Score Value.
			Super Grade.	First Grade.	Below First Grade.	
1	83	Mrs. H. W. Merrick, Agivey House, Aghadowey, Co. Londonderry.	400	249	45	649
2	82	Miss C. C. Meara, Coalisland, Co. Tyrone.	174	414	52	588
3	81	Mrs. T. J. McLaren, Ballykeel, Sixmilecross, Co. Tyrone. (All Light Sussex.)	253	262	118	515

SECTION 5 (a).—WHITE WYANDOTTES (STATION-HOLDERS). 13 PENS.

1	95	Mrs. R. McCullough, Bruslee, Ballyclare, Co. Antrim.	490	254	33	744
2	99	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	453	268	96	721
3	94	Miss M. McAllister, Backnamullagh, Dromore, Co. Down.	513	142	69	655

SECTION 5 (b).—WHITE LEGHORNS (STATION-HOLDERS). 10 PENS.

1	107	Mr. P. King, Leitrim, Banbridge, Co. Down.	475	141	12	616
2	108	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	421	172	41	593
3	104	Mrs. W. Crawford, Redergan, Beragh, Co. Tyrone.	372	209	59	581

SECTION 5 (c).—RHODE ISLAND REDS (STATION-HOLDERS). 22 PENS.

1	120	Mrs. M. D. Bell, Woodview, Moneymore, Co. Londonderry.	481	241	43	722
2	118	Miss M. L. Fleming, Ballymenagh, Dungannon, Co. Tyrone.	474	235	30	709
3	125	Mrs. M. McClintock, Laymore, Ballymena, Co. Antrim.	242	446	94	688

SECTION 6.—POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 17 PENS.

Position.	No. of Pen.	Name of Club.	Number of Eggs Laid.			Test Score Value.
			Super Grade.	First Grade.	Below First Grade.	
1	149	Banbridge and District Poultry Club. (Rhode Island Reds.)	425	277	51	702
2	136	Ballywalter Young Farmers' Club. (White Wyandottes.)	344	341	71	685
3	141	Ballyclare Poultry Club. (White Leghorns.)	355	296	62	651

The "test score value" means the total of the super grade and first grade eggs. Eggs which weigh less than 2 ounces each are graded as "below first grade" throughout the entire test period.

The pen of White Wyandottes entered by Mrs. Darley, which is leading in Section 1, retains the position of first place in the entire test, while the pen of Rhode Island Reds entered by Mrs. Dunwoody and leading in Section 3, is second, displacing from that position Mrs. McCullough's pen of White Wyandottes, which is now third in the entire test and leading in Section 5 (a).

Mr. Hall's pen of White Wyandottes (2nd in Section 1) has the distinction of having laid the highest number of super grade eggs.

The pen of White Leghorns entered by Ballyclare Poultry Club is the leading pen of White Leghorns in the test.

PRICES OF FEEDING STUFFS.

The following table shows the average retail prices per cwt. of Feeding Stuffs at 1st May, 1936, with comparative figures for the corresponding date in 1935.

1936.											
	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent	Price per cwt.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
STARCHY FOODS:											
Maize (whole)	5 0	6 8	14 8	81 5	1 3	5 9	6 8	16 11	81 5	1 5	5 9
Maize Meal	5 5	6 8	15 11	81 5	1 4	6 2	6 8	18 2	81 5	1 6	6 2
Bran, Red	7 2	10 0	14 4	45 3	3 2	6 10	10 0	13 8	45 3	3 0	6 10
Bran, White	8 6	10 0	17 0	45 3	3 9	7 11	10 0	15 10	45 3	3 6	7 11
Pollard, Brown	7 3	11 0	13 2	71 2	2 1	7 0	11 0	12 9	71 2	2 0	7 0
Pollard, White	8 3	11 0	15 0	71 2	2 4	7 10	11 0	14 3	71 2	2 2	7 10
Barley Meal	7 0	6 2	22 7	69 7	2 0	7 11	6 2	25 6	69 7	2 3	7 11
Oats	6 9½	7 6	17 10½	60 0	2 3½	5 8	7 6	14 11	60 0	1 11	5 8
Wheat (whole)	7 10½	9 6	16 5	72 0	2 2	—	9 6	—	72 0	—	—
PROTEIN FOODS:											
Linseed Cake, home-made	10 0	25 0	8 0	71 8	2 9½	10 7	25 0	8 6	71 8	2 11	10 7
Linseed Cake, foreign	9 2½	25 0	7 5	71 8	2 7	9 7	25 0	7 8	71 8	2 8	9 7
Linseed Cake Meal	9 4	25 0	7 6	72 8	2 7	9 11	25 0	7 11	72 8	2 9	9 11
Cotton Cake, decorticated	8 5	35 0	4 10	71 2	2 4	9 3	35 0	5 3	71 2	2 7	9 3
Cotton Cake, undecorticated	—	17 0	—	39 2	—	6 9	17 0	7 11	39 2	3 5	6 9
Earth Nut Cake, decorticated	8 6	41 0	4 2	73 0	2 4	8 6	41 0	4 2	73 0	2 4	8 6
Earth Nut Cake, undecorticated	—	27 0	—	57 0	—	—	27 0	—	57 0	—	—
Soya Bean Meal (extracted)	9 0	38 0	4 9	64 0	2 10	8 8	38 0	4 7	64 0	2 8	8 8
Bean Meal	8 2	20 0	8 0	66 0	2 5	8 3	20 0	8 3	66 0	2 6	8 3
Fish Meal (60% protein)	15 2	53 0	5 9	58 9	5 2	16 4	53 0	6 2	58 9	5 7	16 4
Meat and Bone Meal (40% protein)	9 9	36 2	5 5	44 0	4 5	9 5	36 2	5 2	44 0	3 6	9 5
Meat and Bone Meal (60% protein)	13 11	54 9	5 1	61 3	4 7	14 11	54 9	5 5	61 3	4 10	14 11
OTHER FEEDING STUFFS:											
Linseed, whole	15 3	19 0	16 0	119 2	2 7	15 9	19 0	16 7	119 2	2 8	15 9
Brewers' Grains (dried)	6 6	13 0	10 0	50 3	2 7	—	13 0	—	50 3	—	—
Palm Nut Cake	8 0	17 0	9 5	70 2	2 3½	7 8	17 0	9 0	70 2	2 2	7 8
Palm Nut Meal	7 11	17 0	9 4	78 0	2 0	7 8	17 0	9 0	78 0	2 0	7 8
Potatoes	4 1	0 6	136 1	18 0	4 7	2 2	0 6	71 11	18 0	2 5	2 2
Oat Straw	2 3½	0 9	50 11	20 0	2 3½	1 9	0 9	39 0	20 0	1 9	1 9
Meadow Hay	2 7	4 6	11 3	37 0	1 4½	2 1	4 6	8 11	37 0	1 1	2 1
Turnips (Swede)	0 8	0 7	19 0	7 0	1 11	0 8	0 7	19 1	7 0	1 11	0 8

One of the objects of the foregoing table is to guide farmers in the economic purchase of feeding stuffs.

Ignoring their mineral content, the valuable constituents of any feeding stuff, whether home-grown or purchased, consist of :—

- (1) Carbohydrates—a group of substances which include materials such as starch, sugar, etc. They supply heat or energy to the animal, and the surplus is stored by the animal as fat.
- (2) Oil—which also provides heat or energy, the surplus being stored as fat. For this purpose oil is approximately $2\frac{1}{2}$ times as valuable as the carbohydrates, but its presence in the ration in excessive quantities may lower the digestibility of the ration and cause digestive troubles.
- (3) Protein—The group of bodies termed protein or albuminoids contain nitrogen. Protein is the only ingredient of a feeding stuff which can produce flesh or muscle, and hence its special importance.

All animals require a certain amount of each of the above constituents, but the relative amounts depend upon the class of stock. Thus, for example, a two-year-old fattening bullock requires a relatively small amount of protein (flesh forming material). Its ration should consist mainly of foods rich in carbohydrates, *i.e.*, fat producing substances. On the other hand, a dairy cow is producing milk, which is a substance rich in protein, and as the protein, that is flesh forming material in milk, can only be derived from the protein in the food, the ration for the dairy cow must contain considerably more protein than that for the fattening bullock.

There are very wide differences in the composition of feeding stuffs, both home grown and purchased. Some, such as oats and maize, are rich in carbohydrates, and, therefore, particularly valuable for fattening purposes, whilst others, such as decorticated cotton cake, earlnut cake and linseed cake, are rich in protein, and are chiefly valuable for their flesh and milk-producing properties.

In the following table the composition of some of the more commonly used feeding stuffs is shown :—

PERCENTAGE COMPOSITION.

	Water.	Protein.	Oil.	Carbohydrates.
Turnips (Swede)	88	1	0.2	9
Potatoes	75	2	0.1	21
Oat Straw	14	4	2	37
Meadow Hay	10	10	3	45
Pasture Grass	80	3.5	0.8	10
Cabbage	89	1.5	0.5	8
Fattening Foods :				
Oats	13	9	6	60
Maize Meal	12	10	4	70
Barley Meal	13	12	2	66
Flesh Forming Foods :				
Linseed Cake	11	30	10	35
Decorticated Cotton Cake	9	40	9	26

The farmer frequently asks what is the cheapest feeding stuff to buy. It is, however, often very difficult to give a direct answer. Much depends upon what the feeding stuff is required for, whether for fattening or milk production. Again, maize and oats are essentially fattening foods, whilst decorticated cotton cake is a flesh-forming food, and it would be just as futile to use the cost per ton to compare their values as it would be to use the cost per ton to compare the values of, say, sulphate of ammonia and superphosphate.

Foods of similar composition can, however, be compared, and it is possible for the enterprising farmer to effect considerable economies, not only in the use of home-grown feeding stuffs, but particularly in the purchase of concentrated feeding stuffs, by studying the market prices.

The starch equivalent figure is a measure of the energy, heat or fat producing value of the feeding stuff, and shows the number of pounds of starch which would be required to give the same heat or energy as 100 lb. of the feeding stuff. For example, the table on page 44 states that the starch equivalent of maize meal is $81\frac{1}{2}$, or, in other words, 100 lb. of maize meal will provide as much heat or energy as $81\frac{1}{2}$ lb. of pure starch.

The protein equivalent figure shows the number of pounds of digestible flesh or muscle producing material in 100 lb. of each of the feeding stuffs listed.

PRICES OF FERTILISERS

The following table shows the ranges of retail cash prices of fertilisers per ton at 1st May, 1936.

				Cost of unit of fertilising ingredient at average of range of prices shown.			
				Nitrogen	Phos. Acid	Potash	
Nitrogenous Manures.							
Sulphate of Ammonia (20.6%N)	£7 5 0	to	£7 15 0	$7/3\frac{1}{2}$			
Nitro Chalk (15.5%N)	7 10 0	to	8 15 0	$10/5\frac{1}{4}$			
Nitrate of Soda (15%N)	7 10 0	to	10 0 0	$11/8$			
Phosphatic Manures.							
Superphosphate (16%S.P.A.)	£3 7 6	to	£3 17 6		$4/5\frac{1}{2}$		
Semsol (5%S.P.A. $15\frac{1}{4}$ %P.A.)	3 5 0	to	3 10 0		$4/4\frac{1}{2}$		
Basic Slag (18%P.A.)	3 15 0	to	4 0 0		$4/3\frac{1}{2}$		
Gafsa Mineral Phosphate (26%P.A.)	3 0 0	to	3 2 6		$2/4\frac{1}{2}$		
Potash Manures.							
Kainit (14%P)	£3 0 0	to	£4 5 0				$5/2\frac{1}{2}$
Potash Salts (20%P)	4 0 0	to	4 15 0				$4/4\frac{1}{2}$
Potash Salts (30%P)	5 0 0	to	6 0 0				$3/8$
Muriate of Potash (50%P)	7 10 0	to	8 10 0				$3/2\frac{1}{2}$
Miscellaneous.							
Agricultural Salt	£1 5 0	to	£3 10 0				

Abbreviations: N=Nitrogen. S.P.A.=Soluble Phosphoric Acid
P.A.=Phosphoric Acid. P=Potash.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two grades of a manure which supplies the same fertilising ingredient can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, in the table of prices it is seen that the average of the range of prices for 14% Kainit is £3 12s. 6d. per ton, and for 30% Potash Salts £5 10s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which the Kainit is offered. The cost of a unit of Potash in the 30% Potash Salts is seen to be only $\frac{3}{8}$, whereas the cost of a unit of Potash in Kainit is $\frac{5}{24}$. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing Gafsa Mineral Phosphate is a cheaper source of Phosphoric Acid than Basic Slag, and that Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of Phosphoric Acid as shown in the table on page 46 it should be noted that in the case of Superphosphate, the cost is that of a unit of Soluble Phosphoric Acid, whereas in the cases of Basic Slag, Semsol and Gafsa Mineral Phosphate the figures represent the cost of a unit of insoluble Phosphoric Acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three.

PRICES OF AGRICULTURAL SEEDS.

The following table shows the average retail cash prices of seeds at 1st May, 1936, with comparative figures for the corresponding date in 1935 and 1934:—

	1936	1935	1934
Corn (Seed) :	s. d.	s. d.	s. d.
Wheat (Irish Grown) per cwt.	9 0	9 4	9 3
„ (Imported) „	11 3	10 10	11 0
Oats (Irish grown) „	7 2	7 6	7 10
„ (Imported) „	9 1	10 0	9 11
Barley (Irish grown) „	9 0	10 3	10 2
„ (Imported) „	12 0	11 0	11 6
Root and Green Crops (Seed) :			
Turnips (Swede) per lb.	2 0	2 8	2 0
„ (Aberdeen) „	1 4	1 8	1 5
Mangels „	1 5	1 8	1 5
Carrots „	4 11	5 7	5 1
Clover Seeds :			
Red „	0 11	1 0	1 1
White „	1 0	1 2	1 3
Wild White (Kentish) „	3 11	4 8	4 8
Alsike „	1 5	1 7	1 0
Flax Seed :			
Commercial Varieties :			
Dutch per bag	46 0	42 6	45 0
Pernau „	46 6	48 9	51 8
Riga „	48 0	50 9	48 2
Pure Line (Blue Flowering) Varieties :			
Gossamer per cwt.	69 2	—	—
Stormont Cirrus „	70 0	—	—
Liral Crown „	67 6	—	—
Liral Dominion „	62 6	—	—
Liral Monarch „	62 6	—	—
White Flowering Concurrent „	39 5	—	—
J. W. S. „	58 9	66 3	62 6
Grass Seed :			
Irish Perennial :			
28 lbs. to bushel per bushel	6 1	10 3	9 11
26 „ „ „	5 7	9 0	9 6
Scots Perennial :			
28 lbs. to bushel „	7 2	11 2	10 9
26 „ „ „	6 4½	—	10 6
Irish Italian :			
22 lbs to bushel „	5 2	9 8	10 5
20 „ „ „	5 6	—	10 3
French Italian :			
22 lbs to bushel „	6 8	11 0	11 8
Cocksfoot per lb.	0 6	0 8	0 8
Meadow Fescue „	0 8	1 2	0 8
Timothy „	0 6	1 0	0 7
Potatoes :			
British Queen per cwt.	6 2½	3 7	3 8
Arran Victory „	4 5	3 0	2 3
Kerr's Pink „	4 5	2 11	2 4
Up-to-date „	4 5	2 4	2 5

PRICES OF FAT STOCK.

The following are the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the four weeks ended 28th April, 1936 :—

Week ended.		Bullocks.		Heifers.	
		s.	d.	s.	d.
7th April	..	..	33 6	..	33 9
14th April	..	..	34 0	..	33 9
21st April	..	..	34 3	..	34 6
28th April	..	..	34 9	..	35 0

PRICES OF LIVE STOCK.

Average Prices of Live Stock at Fairs during the Month of April, 1936.

Date	Fair.	Calves (under 9 months.)	Store Cattle.	Fat Cattle (18 months and over).	Springers.		Milch Cows.	Fat Lambs (under 12 months old).	Fat Sheep (over 2 years old.)	Young Pigs.
					Cows.	Heifers.				
		Per Cwt. Live Wgt.	Per Cwt. Live Wgt.	Per Cwt. Live Wgt.	Per Head	Per Head	Per Head	Per Head	Per Head	Per Head
		£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
1	Londonderry ..	—	25/6 to 32/-	30/-	14 15	13 0	—	—	—	—
1	Rathfriland ..	5 17/6	28/- to 32/-	29/-	16 0	13 0	—	—	—	1 5
2	Ballymoney ..	5 3/9	29/- to 32/9	30/6	14 0	12 10	15 0	*1 10	—	1 10
2	Strabane ..	4 10	30/- to 34/6	28/-	12 0	—	12 15	—	—	1 7/6
3	Moy ..	—	30/- to 38/-	30/-	13 12/6	10 2/6	—	—	—	—
7	Omagh ..	5 3/3	34/- to 36/-	30/-	15 0	—	13 6/3	—	—	—
8	Crossgar ..	—	31/- to 33/-	30/-	16 0	14 0	12 10	†1 11/3	—	—
8	Irvinestown ..	6 1	30/- to 34/6	—	15 0	13 0	14 10	†1 15	—	—
8	Kilrea ..	4 10/9	24/- to 32/-	29/-	14 0	11 0	13 10	—	—	1 14
10	Ballygavley ..	—	29/6 to 36/6	29/6	14 0	—	12 10	†1 17/6	—	1 12/6
10	Enniskillen ..	5 4	28/- to 33/-	31/-	15 0	—	13 10	—	—	1 7/6
15	Lisnaskea ..	4 12	27/6 to 36/6	31/6	15 0	12 0	14 0	—	—	1 10
16	Ballynahineh ..	—	31/- to 33/-	32/-	14 0	14 0	12 0	—	—	1 11
18	Portadown ..	5 6/3	30/- to 33/-	30/6	15 10	14 0	14 10	—	—	1 12/6
20	Camlough ..	4 10	23/- to 29/6	31/-	16 0	14 0	16 0	†1 12/6	—	1 15
21	Money more ..	3 14/9	28/- to 32/-	30/6	13 10	12 10	12 0	—	—	1 10
22	Fintona ..	5 7/6	33/6 to 37/-	30/6	10 5	10 0	9 10	†1 17/6	—	1 10
24	Castlederg ..	3 10	30/- to 31/6	30/6	15 10	13 0	13 0	†1 15	—	1 10
24	Killylea ..	—	28/6 to 35/6	31/6	14 0	—	—	†1 15	—	—
25	Ballymena ..	5 10	22/- to 33/-	—	18 0	18 0	12 15	—	—	—
30	Antrim ..	6 17	32/6 to 40/-	33/-	18 0	16 0	16 5	—	—	1 13
							17 0	—	—	1 10

* Mountain.

† Downs and Cross.

‡ Long Wools.

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st March, 1936, and the three months ended 31st March, 1936, with comparative figures for the corresponding periods in 1935.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.			EXPORTS.		
	Month ended 31st March		Three months ended 31st March	Month ended 31st March		Three months ended 31st March
	1936	1935		1936	1935	
Bacon cwt.	1,455	3,018	5,429	33,889	18,184	97,676
Hams "	451	462	1,798	9,993	10,106	36,539
Pork "	—	—	—	3,198	3,691	11,065
Butter "	13,955	17,197	43,408	262	194	717
Eggs gt. hds.	7,983	5,650	24,696	262,414	310,790	556,615
Oat Products (inc. Oatmeal) .. cwt.	1,503	1,541	6,632	7,754	9,069	30,192
Potatoes tons	4	9	19	28,011	13,270	86,108
Lubric cwt.	21	4	105	9,269	9,791	75,371
Grass Seeds "	817	8,480	4,029	45,554	52,002	141,700
						159,726

There were no imports of oats direct from abroad either during the month of March, 1936, or in the corresponding month of last year.

SHIPMENTS OF LIVE STOCK.

Statement Showing the Shipments of Live Stock from Northern Ireland Ports during the following periods, months of April, 1936, March, 1936, April, 1935, four months ended 30th April, 1936, and 30th April, 1935:—

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses.
Belfast	6,242	6,320	1,062	82	—	13,706	362	—	863	1,225	2,564	—	2,564	441
Larne	23	2,881	—	5	—	2,909	—	—	—	—	924	117	1,041	32
Londonderry ..	609	8,418	5	31	3,641	12,704	98	—	22	120	292	—	292	6
Newry	20	271	—	—	34	325	4	—	90	94	—	—	—	5
Total, Apl., 1936 ..	6,894	17,890	1,067	118	3,675	29,644	464	—	975	1,439	3,780	117	3,897	484
Total, Mar., 1936 ..	7,562	17,441	1,036	65	2,145	28,249	771	—	15	786	3,606	—	3,606	387
Total, Apl., 1935 ..	6,863	18,602	1,363	208	2,715	29,751	898	—	3,164	4,062	8,346	134	8,480	463
Total Four months ended 30th Apl., 1936	33,153	61,844	4,079	331	8,223	107,630	5,982	—	990	6,972	16,913	184	17,097	1,494
Total Four months ended 30th Apl., 1935	26,618	64,724	4,651	487	5,459	101,939	12,758	—	3,274	16,032	33,956	1,407	35,363	1,652

Table showing the numbers of Live Stock (1) exposed for sale and (2) sold at 20 fairs in Northern Ireland during the months of April, 1935 and March and April, 1936.

Description of Live Stock.	April, 1935.		March, 1936.		April, 1936.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	10,112	7,718	7,584	5,736	7,755	6,473
Fat Cattle ..	1,372	1,236	1,693	1,550	1,752	1,624
Dairy Cattle ..	1,391	1,070	1,243	930	1,207	929
Sheep ..	696	503	394	255	790	491
Lambs ..	117	109	180	123	125	110
Young Pigs ..	3,271	2,616	3,123	2,705	3,443	3,003

Supplies of store cattle at fairs held during April were slightly larger than for the previous month, but of only medium dimensions for the time of the year. Trade continued to improve, and all classes of stores were in much better request than for some considerable time past, and prices showed an all-round improvement. There was a very keen demand for strong stores in forward condition at appreciably higher prices. Polly bullocks, in particular, were quickly bought up at advanced prices by shippers, and small stores also sold readily to graziers. In general, it may be stated that business in this section was much more satisfactory than has been experienced for some considerable time. There was a larger turnout of fat cattle, and the offerings generally were of good quality. A well sustained demand for beef resulted in the bulk of the offerings being absorbed at firmer prices. Dairy cattle were in slightly smaller supply, and the animals were mostly of inferior quality. On the whole, trade showed little change and prices were similar to those obtained in March. The best trade was done in good young cows suitable for the dairy trade, and well-uddered young heifers at firm prices, but for other descriptions a slow, dragging business was conducted at unchanged prices.

The offerings of sheep were larger than a month ago, whilst lambs were in smaller supply. Trade in this section remained comparatively quiet. Young spring lambs were being purchased throughout the country at satisfactory prices, whilst fat sheep and lambs fit for butchering continued to be in good demand for local requirements at around late quotations. Ewes with lambs at foot were in fair request.

Young pigs were in slightly larger number, and trade in this section was steady throughout the month, and prices had a firmer tendency towards the close.

This report will be sent free monthly as issued on application being made to the Secretary, Ministry of Agriculture, Stormont, Belfast.

11th May, 1936.

ULSTER DAIRY SCHOOL, COOKSTOWN

U. D. S.

USEFUL and practical courses of instruction in poultry-keeping, dairying and domestic science are provided for girls at this School.

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MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

- | | |
|---|---|
| No. 1. Flax Seed, 1936. | No. 44. Results of Crop Experiments, 1935. |
| " 2. Improvement of Farm Poultry. | " 45. The Breeding and Rearing of Pigs. |
| " 3. Feeding for Egg Production. | " 46. Hints for Winter Egg Production. |
| " 4. Marketing of Eggs. | " 47. The Care and Management of Sheep. |
| " 5. The Dishorning of Calves. | " 48. Baby Beef Production. |
| " 6. The Packing of Apples in Standard Boxes. | " 49. American Gooseberry Mildew. |
| " 7. Potato Trials. | " 50. Potato Blight. |
| " 8. Seed Testing for Farmers. | " 51. Butter-making on the Farm. |
| " 9. The Renovation of Orchards. | " 52. Gapes in Chickens. |
| " 10. Fruit Tree Pests—Cecidid Bugs. | " 54. The Breeding and Rearing of Calves. |
| " 11. Fruit Tree Pests—Aphides and Apple Sucker. | " 55. Destruction of Ragwort or Benweed. |
| " 12. Fruit Tree Pests—Caterpillars. | " 56. Identification of Egg Supplies. |
| " 13. Contagious Abortion in Cattle. | " 57. How to have Eggs of First Quality. |
| " 14. Cheese-making on the Farm. | " 58. How the Fertilisers and Feeding Stuff Act benefits the Farmer. |
| " 15. Suitable Varieties of Fruit. | " 59. Bacillary White Diarrhoea (Pullorum Disease). |
| " 16. The Feeding of Dairy Cows. | " 60. Advantages of Winter Agricultural Classes. |
| " 17. Home Bottling of Fruits and Vegetables. | " 61. The Care and Management of Breeding Bulls. |
| " 18. Marketing of Dead Poultry. | " 62. The Production of Timber on the Farm. |
| " 19. How to Feed Linseed. | " 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet. |
| " 20. The Hatching and Rearing of Chickens. | " 64. The Destruction of Warble Fly Maggots in Cattle. |
| " 21. The Uses and Advantages of Portable Poultry Houses. | " 65. The Packing of Apples in Barrels. |
| " 22. Leather-Jacket Grubs. | " 66. Seed Testing Facilities for Traders. |
| " 23. The Handling and Care of Wool. | " 67. The Cultivation of Vegetables. |
| " 24. Fluke in Sheep. | " 68. The Cultivation of Strawberries. |
| " 25. The Rearing and Management of Young Horses. | " 69. The Construction of Piggeries. |
| " 26. Ordnance Survey Maps for Farmers. | " 70. Ringworm. |
| " 27. How to Keep Eggs Clean. | " 71. The Cultivation of Raspberries. |
| " 28. The Construction of a Laying House for Poultry. | " 72. Tree Planting for Shelter and Ornament. |
| " 29. The Selection and Breeding of Laying Hens. | " 73. The Propagation and Maintenance of Healthy Stocks of Potatoes. |
| " 31. Coccidiosis in Poultry. | " 74. New Pure Strains of Flax. |
| " 32. Roup of Poultry (Fowl Pox). | " 75. Pig Production and the Pigs Marketing Scheme. |
| " 33. Spraying Calendar for Apple Orchards. | " 76. Acarine (Isle of Wight) Disease of Bees. |
| " 34. The Pruning of Apple Trees. | " 77. Licensing of Milk Producers and Distributors. |
| " 35. The Fattening of Pigs. | " 78. Graded Milk. |
| " 36. Advantages of Milk Recording. | " 79. The Picking and Storing of Apples. |
| " 37. The Raising and Fattening of Turkeys. | " 80. Hoose or Husk in Farm Stock. |
| " 38. The Destruction of Charlock. | " 81. The Construction of Cow Houses. |
| " 39. The Production of Clean Milk. | " 82. White Scour in Calves. |
| " 40. The Laying Down and Management of Temporary Pastures. | " 83. The Care, Management and Feeding of the Poultry Breeding Stock. |
| " 41. Blackleg, Blackquarter or Quarterill. | |
| " 42. The Purchase of Balanced Rations for Dairy Cows. | |
| " 43. Tuberculosis in Poultry. | |

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

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|---|
| No. 1. Phosphatic Fertilisers. |
| " 5. Why Pay a Tax on the Horns of Cattle? |
| " 8. Basic Slag. |
| " 9. Smut in Oats. |
| " 10. Purchase of Fertilisers and Feeding Stuff. |
| " 11. Fertilisers and Feeding Stuff Act—General Summary. |
| " 12. The treatment of Liver Fluke. |
| " 13. The Ox-Warble Fly. |
| " 306. Fertilisers and Feeding Stuff Act, 1926—Revision of Regulations. |

MISCELLANEOUS PUBLICATIONS.

- Store Cattle.
- Reports on Egg-Laying Tests.
- Crop Insurance.
- List of Growers of Certified Crops of Immune Varieties of Potatoes.
- List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
- The Ministry's Monthly Report.
- Register of Premium Stallions.
- Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
- Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated:—

- (1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
- (3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.